

**TITLE PAGE**

**CORRELATES OF *ḤALĀL* FOOD AMONG MUSLIM CONSUMERS, FOOD  
SERVICE PROVIDERS AND HEALTH WORKERS IN THE SOUTH WEST,  
NIGERIA**

**BY**

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## **CERTIFICATION**

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## **DEDICATION**

This thesis is dedicated to Almighty Allah, my Creator and Sustainer and all inclined and conscious Muslims.

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## ABSTRACT

*Halāl* food is food that is in conformity with the *Sharī'ah* dictates. However, in the South West, Nigeria, a number of foods patronised by Muslims are largely produced and supervised in the context of Codex Alimentarius without consideration for *halāl* food requirements, an obligation for Muslims. Existing studies on *mu'āmalah* (social obligation) dwelt extensively on food processing with little attention paid to *halāl* food. This study was, therefore, designed to examine correlates of *halāl* food [Awareness of *Halāl* Food (AHF), Knowledge of *Halāl* Food (KHF), Perception of *Halāl* Food (PHF), Attitude Towards *Halāl* Food (ATHF), Subjective Norms (SN); Perceived Behavioural Control (PBC), Behavioural Intention (BI), Religiosity (REL.), Perception of *Halāl* Certification (PHC) and Perception of *Halāl* Logistics (PHL) and *Halāl* Terms (HT) ] among Muslim consumers, food service providers and experienced health workers. This was with a view to determining whether foods are produced and managed in compliance with Islamic dietary law.

Theory of Planned Behaviour and Hazard Analysis Critical Control Points were adopted as the framework. The mixed methods of QUAN+qual design was used. The convenient sampling was used to administer a questionnaire to Muslim consumers across the states (Ekiti-353, Lagos-361, Ogun-399, Ondo-367, Osun-372 and Oyo-371). The purposive sampling technique was used to select 525 experienced health workers (Ekiti-83, Lagos-89, Ogun-84, Ondo-94, Osun-85 and Oyo-90). Purposive sampling was also used to select 290 volunteered primary food service providers (Ekiti-49, Lagos-44, Ogun-49, Ondo-49, Osun-50 and Oyo-49) and 175 workers in licensed processed food industry (Ekiti-30, Lagos-31, Ogun-31, Ondo-29, Osun-29 and Oyo-25) based on their involvement in food value production. The instruments used were AHF( $r=0.84$ ), KHF( $r=0.88$ ), PHF( $r=0.91$ ), ATHF( $r=0.92$ ), SN( $r=0.93$ ), PBC( $r=0.86$ ), BI( $r=0.93$ ), REL( $r=0.94$ ), PHC( $r=0.92$ ), PHL( $r=0.85$ ) and HT( $r=0.93$ ) questionnaires. In-depth interviews were conducted with eight personnel of *halāl* certification bodies for Muslim food consumption, while focus group discussions were held with six personnel each from health, primary and processed food workers. Quantitative data were analysed using descriptive statistics and ANOVA at 0.05 level of significance, while qualitative data were content-analysed.

The AHF( $r=0.56$ ), KHF( $r=0.57$ ), ATHF( $r=0.60$ ), SN( $r=0.48$ ), PBC ( $r=0.42$ ), BI( $r=0.63$ ), REL( $r=0.45$ ), PHC( $r=0.54$ ) and PHL( $r=0.52$ ) had positive significant relationships with *halāl* food for Muslim consumption. The independent variables jointly predicted *halāl* food for Muslim consumption ( $F_{(9,2223)}=280.32$ ; Adj.  $R^2=0.53$ ), accounting for 53.0% of its variance. The AHF( $\beta=0.22$ ), KHF( $\beta=0.10$ ), ATHF( $\beta=0.12$ ), BI( $\beta=0.36$ ) and REL( $\beta=0.042$ ) had relative contribution to *halāl* food for Muslim consumption, while others did not. Most of the certified food companies had no internal *halāl* food specialists. The health workers were not aware of Islamic provisions, such as avoidance of slaughtering animal in the presence of other animals and single swift slit. The food workers predominantly understood the *sharī'ah*-compliant and non-*sharī'ah* compliant foods, such as *khinzīr* (pork) and *maytatah* (carrion).

Awareness of *Halāl* Food, Religiosity, Knowledge of *Halāl* Food, Behavioural Intention, Perception of *Halāl* Certification and Attitude Towards *Halāl* Food contributed to *halāl* foods for Muslim consumption in the South West, Nigeria. Establishment of government *halāl* certification agencies is a potential influencer towards consumption of *halāl* foods.

**Keywords:** *Halāl* food, *Harām* food, Muslim consumers, Islamic dietary law, Secular dietary law

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## LIST OF ABBREVIATIONS

ANT:	Actor-Network Theory
CCPs:	Critical Control Points
CT:	Convention Theory
E-Numbers:	European Numbers (used to codify food additives and preservatives)
HACCPs:	<i>Halāl</i> Analysis Critical Control Points
HaCFoS:	<i>Halāl</i> Compliance and Food Safety Limited
HASDAT:	<i>Halāl</i> Standard Development Trust
HCA:	<i>Halāl</i> Certification Authority
HHCCPs:	<i>Halāl</i> Hazard Critical Control Points
JAKIM:	Jabatan Kamajuan Islam Malaysia
MUSWEN:	Muslim ‘ <i>Ummah</i> for South West, Nigeria
NSCIA:	Nigeria Supreme Council for Islamic Affairs
TPB:	Theory of Planned Behaviour

## GLOSSARY OF NON-ENGLISH WORDS

*Al-fard*: Obligatory act that is expected of a mukallaf to uphold omission of which fetches such mukallaf a stipulated punishment. It is interchangeably used with *al-wajib*.

*Al-khabīthat/al-khabā'ith*: It refers to all filthy (dirty) substances prohibited to be taken as food.

*Al-wājib*: Obligatory act that is expected of a mukallaf to uphold omission of which fetches such mukallaf a stipulated punishment. It is at times interchangeably used with *al-fard*.

*Bahīmah al-an'ām*: It refers to four footed domestic mild animals. However, Shafi' school of thought includes all four footed animals be it domesticated or not or mild or wild animals.

*Egungun*: It is a traditional religion popular among the Yoruba tribe. It has different types of masquerades owned by different family or clans among the Yoruba tribe.

*Halāl*: This refers to any action, deed, saying or practice that is permissible by Shari'ah.

*Halālan Tayyiban*: It literally means lawful and wholesome. It is a concept that connotes a status of permissibility and wholesomeness of food that are edible for Muslims consumption by *Shariah*.

*Harām*: It refers to any prohibited act, practice or talk by Shari'ah. It is the opposite of *halāl* which means lawful, permissible, allowed or legalised.

*Hukm shari'*: It literally means rule of Islamic law. It connotes and explains/postulates the basics of Islamic rule of law.

*Kosher*: It is the food/meat produced under strict adherence to Jewish religion dietary law particularly by a certificated kosher butcher or food processor and prescribed as the only food that is lawful for consumption for any of the Judaism faithful.

*Makrūh*: It means disliked or disgusting or disapproved.

*Mukallaf*: It refers to an adult upon whom law is made or upon whom an obligation is prescribed omission of which fetches the *mukallaf* the punishment attached to the sin or offence.

*Mugbah*: This refers to any act or practice that is neither prescribed nor prohibited by Shari'ah.

*Sango*: It is a popular religion among the Yoruba. The religion is established after the demise of the heroic ancestor called Sango. Sango was a powerful man who did emit fire from his mouth when he talked. He did fight with thunder during his life. He was considered as the god of thunder among his faithful.

*Ogun*: It is a popular religion practised among the Yoruba. The religion is named after its founder, a Yoruba hero, who was believed to be the god of iron.

*Shubhaat*: It literally means doubtful food or substances. It refers to any food whose source is unknown and the status of its *ḥalālness* is doubtful (not certain).

*Sunnah*: It refers to the deed, actions, prescription and or approval of the Prophet that Muslims emulate, practise or refer to according to circumstances. It is a source of *Shari'ah* and legal proof next to Qur'an. It corroborates the ruling which takes its source from the Qur'an.

*Maqāsid al-Sharī'ah*: It consists of two words, which are *maqāsid*, the plural form of *qasd*, which means purpose, intention or objective and *Sharī'ah* which means the Islamic rule of law. Thus, *maqāsid al-Sharī'ah* are the objectives of the Islamic rule of law. It is a branch of knowledge in Islamic law.

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background to the study

Consuming foods and drinks is rewardable in Islām if it is done in accordance to the guidelines (*ḥalāl* food principles) that are provided in the Qur’ān and *Sunnah* of the Prophet (PBUH) since taking of prohibited (*ḥarām*) foods and drinks attracts punishment (in Islām). Thus, *ḥalāl* food is recommended in the Holy Qur’ān by Allāh for Muslim consumption. Thus, there is a need for effective management and efficient supervision of *ḥalāl* food production from farm to folk in line with the Islāmic dietary laws towards ensuring that foods consumed by Muslims are authentic *ḥalāl* products.

*Ḥalāl* is an Arabic word which means permissible, lawful, legitimate, legal or authorised. It takes its root from the verb ‘*ḥallala*’ or *ḥalla* which means to permit, legitimise, allow or legalise.<sup>1</sup> *Ḥalāl* is a term that covers anything that is permissible in Islām be it food, drink, drug, action or service. An action is taken to be *ḥalāl* if it is permitted by the *Sharī’ah*. A service is *ḥalāl* if it is permitted by the *Sharī’ah*. Food is said to be *ḥalāl* if *Sharī’ah* sanctions it and does not have contact with any *ḥarām* source in the course of production. *Ḥalāl* as a term or phenomenon is as old as the existence of man on earth. Allāh made all food *ḥalāl* in the garden but only prohibited the fruit of a tree for Ādam’s consumption. When Ādam ate from it, he was down in worth and became ashamed of himself to approach Allāh. He shied away from Allāh. Allāh also rendered him unworthy to live in the Paradise and sent him away from the Paradise with his wife, Ḥawā’u. Allah says:

“We said: O Adam! Dwell, you and your wife in the garden and eat of the beautiful things therein as (where and when) you will; but approach not this tree or you run into harm and transgression”. Q2:35.

Similarly, Allāh makes all food *ḥalāl* for Muslims except those that are mentioned as prohibited in the Qur’ān and *Sunnah* and any of their products. Allāh says:

Say: (O! Muhammad)! I do not see from what it is revealed unto me (the Qur'an) anything prohibited for an eater (from food) he eats, except it is a carrion or flowing blood or the flesh of pig, for it is filth, or what is slaughtered for other than Allāh, for it is an act of arrogance (*fisq*) but whosoever is constrained (to eat the prohibited) not as act of willingful transgression, then, Allāh is Most Forgiving, Most Merciful.Q6:45.

Also, Allāh says:

“Lawful unto you (for food) are all four-footed animals, with the exceptions named: But animals of the chase are forbidden...” Q5:2.

Allah enjoins the Muslims not to make unlawful what Allah makes lawful for them and warns them not to trespass. He vehemently enjoins Muslims to consume from what He created for them but only the lawful and wholesome. Allāh also says:

“O you who believe! Make not unlawful the good things which God has made lawful for you. But commit no excess...” Q5:90.

“And eat from things which Allāh has provided for you, lawful and good, but fear Allāh in whom you believe.” Q5:91.

Even though, *ḥalāl* food is recommended for the Muslims as religious obligation, all mankind was addressed and enjoined by Allah to consume *ḥalāl* food as clearly stated in the Glorious Qur'an. Allah says:

“O you people! Eat from what is on earth, lawful and good, and do not follow the footsteps of the Satan, he is to you an avowed enemy.” Q2:168.

The Prophet was reported to have said:

Abu Hurayrah, *raḍiyAllāhu ‘anhu* (may Allāh be pleased with him) reported that the Messenger of



Allāh said: Verily, Allāh, the Exalted, is Pure and does not accept but that which is pure. Allāh commands the believers with what He commands the messengers. Allāh, the Almighty, has said: O you messengers! Eat of the good things and act righteously. Allāh, the Almighty, also says: O you who believe, eat of good things that we have provided for you with...<sup>2</sup>

The holy Prophet was reported to have said:

From 'Abu 'Abdullahi al-Nu'mān bin Bashīr may Allāh be pleased with both of them (who) said: I heard from the Messenger of Allāh (SAW) saying: What is lawful is clear and what is unlawful is clear but between them are certain doubtful things which many people do not recognise. He who guards against doubtful things keeps his religion and honour blameless. But he who falls into doubtful things falls into what is unlawful just as a shepherd who pastures his animals round a preserved garden will soon pasture them into it...(Reported by both Al-Bukhāri and Muslim).<sup>3</sup>

The food mentioned as *ḥarām* brings about the Muslims curiosity of ḥalālness of food status which they consume as there could be cross-contamination of non-ḥalāl food or substance with *ḥalāl* food and also, there could be deliberate addition of non-ḥalāl substance with *ḥalāl* food in the course of production or procurement by unscrupulous food manufacturers.

The wide-spread of *ḥalāl* food concept beyond Islāmīc states could be traced to 1960 insurgency movement in Makkah which aimed at spreading Islām and ensuring that its fundamentals are observed globally where Muslims are found. The insurgents attacked the Saudi royal family accusing them of misusing the treasury of the 'ummah (community). The insurgents clamoured that the treasury should be spent to build mosques and *madāris* (Arabic schools) in any towns, cities or places where Muslims are found regardless of their numbers; and they should ensure that Islāmīc fundamentals are promulgated religiously and observed by Muslims in all places where they live. The immigrant Muslims then saw that many foods they consumed were not allowed in Islām. They initially consumed meat slaughtered according to kosher (meat of animals slaughtered by 'ahlu al-kitāb (the Jew) guidelines. The

Muslims were not satisfied with kosher meat. They doubted its *ḥalāl*ness despite that Allāh permits the Muslims to eat their food. This awareness eventually led to the emergence of establishment and formation of *ḥalāl* organisations and agencies across the globe creating *ḥalāl* markets. In 1963, The Islāmic Society of North America was established. This was the oldest and largest Islāmic Organisation in the United States. This society clamoured for *ḥalāl* food certification on food manufactured, processed and marketed in United States. In Malaysia, *Ḥalal* Food Forum was founded and secured a pledge from the Food and Agriculture Organisation of United States of America (FAO) to include *ḥalāl* guidelines for the use of *ḥalāl* term in the Codex Alimentarius (international food laws) to protect the term *ḥalāl* from being used inappropriately. *Ḥalāl* food products, certification and markets are thus seen as a modern socio-economic phenomenon and of West origin.<sup>4</sup>

*Ḥalāl* food has gained a universal popularity even among non-Muslims as the only lawful food that a devout Muslim should consume. *Ḥalāl* food consumption is embraced in Ghana, South Africa, and even in the United Kingdom which are neither Islāmic nor Muslim states. Nigeria is one of the most Muslim populous countries in West Africa with her Muslim population estimated to be around 50%.<sup>5</sup> Nigeria is also a member state of Organisation of Islāmic Congress (OIC) since 1969 as observer member and became an active member in 1986.<sup>6</sup> Apart from the religious concern of *ḥalāl* food, *ḥalāl* food has transcended to economic level. It is now immensely contributing to global market. Many non-Muslim countries are *ḥalāl* food players; benefitting from the gross income in trillion USD from *ḥalāl* food<sup>7</sup>; yet, Nigeria is not one of the *ḥalāl* food players. Moreover, in the Nigeria food sector, crop production, livestock, fishing, food and drinks, are predominantly *ḥalāl*. All crop production and fishing are *ḥalāl* by origin. Only pig is *ḥarām* in livestock production while beer and alcoholic wine are the only *ḥarām* products in the foods and drinks section of food sector. Some packaged foods have *ḥalāl* inscriptions as logos on their packs showing that the products are *ḥalāl*-certified. However, most of these logos or the inscriptions do not portray the names of any *ḥalāl* certification agencies or organisations. This makes it difficult to identify or trace the certifiers either locally or internationally as in the cases of National Food and Drug Administration Commission (NAFDAC) or Standard Organisation of Nigeria (SON) certified products. Thus, *ḥalāl* food principle is expected to be widely embraced in Nigeria and therefore, deserves academic

investigation to examine the extent *ḥalāl* food concept as an Islāmic fundamental has been upheld and can be promoted for religious, health and economic bases. In Lagos and Ogun States of the South West, Nigeria, *ḥalāl* food certificates were first issued in April, 2008, by Nigeria Supreme Council for Islāmic Affairs (NSCIA) during the time of Late Dr Lateef Adegbite as the Secretary General of the Council for May & Baker Plc. The company which has been in existence in Nigeria since 1944 was said to have made request in that respect. The request was not for its consideration for Muslim consumers here in Nigeria but as a condition for its establishment in Ghana, one of the Nigerian neighbouring countries. In the same vein, Obasanjo Farm, excluding pig and pig product unit, was also issued *ḥalāl* certificate by the Council before the demise of Late Dr Adegbite who died on 28<sup>th</sup> September, 2012. The Supreme Council for Islamic Affairs has not certified any other food companies since the demise of Dr Adegbite.<sup>8</sup> In addition, there has not been follow-up inspection visits to the companies that have been certified.

Muslim 'Ummah for South West, Nigeria (MUSWEN) established in 2008, issues *ḥalāl* certificates to food companies that approach it. The first certificate it issued was in 2013 for a Lebanese food company, Sayed Farms Ltd, located in Ibadan. Since 2013, MUSWEN had issued three companies *ḥalāl* food certificates based on the companies' request. However, there is no *ḥalāl* food certification team formed or appointed as a permanent team. Experts or professionals that consist of various relevant fields are usually invited for inspection and accreditation of any company that approaches the body for certification. These include professionals in Food Technology, Agriculture and Islāmic Studies among others. Dr Abiodun Olaiya of the Federal University of Agriculture Abeokuta led the team to accredit Sayed Farms for *ḥalāl* certification. The certificates issued by MUSWEN to companies are subjected to annual renewal. The 'Ummah has not been carrying out follow-up supervision exercise to the companies that have been issued *ḥalāl* certificates since 2013.<sup>9</sup>

Only few modern Islāmic societies have been trying to observe *ḥalāl* meat guidelines by slaughtering cows every Sunday and selling them to members at the end of their weekly programmes to prevent them from consuming animal meat slaughtered in un-Islāmic ways. The Muslim Congress (TMC), Abeokuta Chapter, is identified with the practice.<sup>10</sup> However, this practice has so far been limited only to animal slaughtering.

Therefore, there is a need to examine the food status in the markets and sensitise the Muslim *'ummah* and other stakeholders in food sectors on *ḥalāl* food concept to be widely imbibed.

Looking at the food we consume, many foods processed in companies and industries are done by people who have little or no Islāmic inclination. Even, where Muslims are grossly involved in animal meat processing, it is observed that little concern is given to *food* processing in *ḥalāl* way.

It was observed that majority of Muslims in Nigeria do not reckon with the need to take *ḥalāl* food as legislated in Islām and emphasised in various *āyāt* (verses) of the holy Qur'ān and the *Ḥadīth*. Passive response was received from many Muslims from their attitude towards *ḥalāl* food advocacy which was carried out to awaken Muslims towards conscious consumption of *ḥalāl* food. Many Muslims patronise hotels, restaurants, and cafeterias and eat foods without minding their sources and ingredients that are used to produce them. Also many Muslims do buy foods and meats indiscriminately, just to get something to eat in as much as the food is neat, fresh, well packaged and delicious. Company products are given a great priority as the best food for the well-to-do class. Imported goods are taken to be the best food by most educated Muslims to show that they are exposed and not primitive. It was reported that 85% of educated Nigerians eat poisons as foods.<sup>11</sup> With this high level of ignorance, negligence, nonchalant and lackadaisical attitude, method of slaughter is given little concern by most Muslims.<sup>12</sup> The assumption of the Muslim consumers is that the butchers slaughter the animals in line with the *Sharī'ah*. This is because, many Muslims in South West, Nigeria have taken it for granted that animals are slaughtered in Islamic ways considering that majority of the butchers are Muslims.

Some Muslims do purchase infant foods such as Cerelac, Nido, Nestle, etc to feed their children not bothering to know the *ḥalāl* status of the contents or ingredients in them. Most Muslims take herbs as well as industrial pharmaceutical products without minding their components. Even, many of them do not consider drugs as foods.<sup>13</sup>

*Halāl* food and *ḥalāl* signs (logos) are widely popular phenomena. *Ḥalāl* logo is inscribed on the packs of some company food products. Are these products really *ḥalāl* foods or processed through *ḥalāl* means and with *ḥalāl* ingredients? This is

really a challenge for Muslim scholars to investigate the abuse of *ḥalāl* labels on fake *ḥalāl* food products.<sup>14</sup> The research, thus, aims to investigate Muslim consumers' awareness, knowledge and perception of *ḥalāl* food consumption, their knowledge of *ḥalāl* food and their perception of its certification and logistics. It also aims at investigating the awareness, knowledge and perception of food service providers and health workers of *ḥalāl* food and their perception of *ḥalāl* food certification and logistics and *ḥalāl* slaughter. In addition, the study examines the certification bodies' operation in compliance with *Sharī'ah* with a view to establishing their standard of operation.

## **1.2 Statement of the problem**

Food is a fundamental issue in Islām. All food is lawful except those prohibited directly or indirectly by Allāh and His Messenger. The prohibition of some foods, thus, leads to the concept of *ḥalāl* food. With Nigeria being a multi-religious country and with many adherents of other faiths actively and grossly involved in food production, coupled with daily increase in modern and new food products, whose *ḥalāl* status are doubtful, produced in and imported into the country, the *ḥalāl*ness of most foods consumed by Muslims are doubtful. Today, many countries around the world have gone into *ḥalāl* food production. Many *ḥalāl* food players at the international *ḥalāl* markets are non-Muslim states/countries. In countries like Malaysia, United Kingdom (U.K), Neitherland, Thailand and France, *ḥalāl* food production receives government attention. Malaysia, with just a population of around thirty million people including non-Muslims, is considered to be *ḥalāl* food hub in the world and the first to set an internationally accepted *ḥalāl* standard. The standard is laid by the Malaysian government and the certification is carried out, supervised and controlled by government agency- Jabatan Kamajuean Islam Malaysia (JAKIM).<sup>15</sup> *Ḥalāl* food production and certification have not been widely spread in the South West, Nigeria. Nigeria with over 206,000,000 people with about 50% Muslim populace<sup>16</sup> is not yet into serious operation of *ḥalāl* food practice and does not belong to international *ḥalāl* food players in the global *ḥalāl* market; meaning that Nigeria has not been benefiting from the economic prospects in *ḥalāl* food industry which is estimated to be 2.3 trillion USD annually<sup>17</sup>. Most Muslims in the South West, Nigeria do not bother about the sources of foods they consume and they do not give *ḥalāl* food concept wide publicity and consideration. The current Nigeria situation on *ḥalāl* food

concept necessitates research into administration of *ḥalāl* food in the region of the study.

### **1.3 Research questions**

1. To what extent can awareness of *ḥalāl* food, knowledge of *ḥalāl* food, attitude, subjective norms, perceived behavioural control, behavioural intention and religiosity, perception of *ḥalāl* certification and logistics possessed by Muslim consumers influence their perception of *ḥalāl* food?
2. To what extent can awareness of *ḥalāl* food, knowledge of *ḥalāl* food, knowledge of *ḥalāl* slaughter, awareness of *ḥalāl* certification, perception of *ḥalāl* certification and logistics affect the perception of primary food workers towards *ḥalāl* food?
3. To what extent can awareness of *ḥalāl* food, knowledge of *ḥalāl* food, perception of *ḥalāl* certification, perception of *ḥalāl* logo and logistics influence the perception of processed food workers on *ḥalāl* food?
4. To what extent can awareness of *ḥalāl* food, knowledge of *ḥalāl* food and awareness of *ḥalāl* slaughter have influence on the perception of health workers towards *ḥalāl* food?
5. How compliant are the standards of operation of *ḥalāl* certification bodies with *Sharī'ah* food guidelines?

### **1.4 Objectives of the study**

The research was designed mainly to examine the correlates of *ḥalāl* food among the Muslim consumers, food service providers and health workers in the South West, Nigeria. The specific objectives are to:

1. Explore the extent to which awareness of *ḥalāl* food, knowledge of *ḥalāl* food, attitude, subjective norms, perceived behavioural control, behavioural intention and religiosity, perception of *ḥalāl* certification and logistics possessed by Muslim consumers influence their perception of *ḥalāl* food.
2. Investigate the influence of awareness of *ḥalāl* food, knowledge of *ḥalāl* food, knowledge of *ḥalāl* slaughter, awareness of *ḥalāl* certification, perception of *ḥalāl* certification and logistics on the perception of primary food workers towards *ḥalāl* food.

3. Examine the level to which awareness of *ḥalāl* food, knowledge of *ḥalāl* food, perception of *ḥalāl* certification, perception of *ḥalāl* logo and logistics influence the perception of processed food workers of *ḥalāl* food.
4. Explore the effects of awareness of *ḥalāl* food, knowledge of *ḥalāl* food and awareness of *ḥalāl* slaughter on the perception of health workers towards *ḥalāl* food.
5. Examine the level of compliance of *ḥalāl* certification bodies with *Sharī'ah* guidelines.

### **1.5 Thesis statement**

Consumption of *ḥalāl* food is a veritable tool towards the realization and actualisation of its religious, health and economic benefits for the Muslims and the society at large.

### **1.6 Significance of the study**

Broad approach has not been given to the study of *ḥalāl* food concept by previous researchers. Researchers have written extensively on food, food processing and food technology but not enough of their writings were based on the Islāmic practice necessitating the need to carry out research on the state of *ḥalāl* food production and consumption looking at some factors that can positively influence and promote its consumption and production among the consumers and major stakeholders in food industry. This research work was designed to fill the vacuum.

Thus, this work serves as a comprehensive and concise compendium for the Muslim *'ummah* and any other person or persons on *ḥalāl* food as it elucidates and establishes the implications of *ḥalāl* food spiritually, socially, economically and health-wise to the entire readers; and it also exposes the needs why *ḥalāl* food should be consumed by Muslims as a religious fundamental and be prioritised by non-Muslims in food selection on the basis of its health benefits which they are exposed to by the research work. This is because it will remove the ignorance of the majority of Muslims on many processed foods which they believe they are the most hygienic by exposing them to harmful coded additives in the ingredients of some food products.

Another benefit is the identification of authentic *ḥalāl* logos. The research also serves as “an awake” to Muslim bodies and organisations to realise their obligations in

addressing and promulgating fundamental issues such as *ḥalāl* food production and marketing, and this will help them put a stop to nonchalant and les-affaire attitude towards the consumption of *ḥalāl* food. It can lead to the springing up of *ḥalāl* food companies and *ḥalāl* markets in Nigeria as experienced by other countries of the world like United Kingdom, South Africa, Ghana and Malaysia. The existing food companies would benefit from the research work as it will expand their markets to countries where *ḥalāl* foods are patronised.

The thesis serves as a source of reference for the government in terms of its initiatives and policies on foods. Giving a better knowledge of *ḥalāl* food concept and exposing it to its economic prospects, the government would not hesitate to approve establishment of *ḥalāl* organisations and agencies in the region and the country as a whole as it is practised in other countries of the world where Muslims form a vast majority. With the results of the research, the *fatwa* on *ḥalāl* food can have a space in the national policy on food. The results of the research can lead to institutionalisation of *ḥalāl* food in Nigeria.

### **1.7 Scope of the study**

The research studied the correlates of *ḥalāl* food among Muslim consumers, food service providers and health workers in the South West, Nigeria. Investigation of Muslim consumers in their consumption of *ḥalāl* food was carried out across Muslim organisations, Muslim societies, mosques and schools in the area of coverage. It covered investigation on *ḥalāl* food consumption and production among health workers (sanitary inspectors, NAFDAC officers and veterinary doctors), primary food workers (street food hawkers, canteens, cafeterias, restaurants, bakeries and abattoirs), licensed processed food workers and operation of *ḥalāl* certification bodies.

### **1.8 Statement of limitations**

Questionnaires were distributed in six cities of the zone, a city from each state. This was so because of consideration for urbanity. Some companies were reluctant to grant the conduction of the research questionnaire while some did not grant it. No laboratory test of food products was involved in this study.



## 1.9 Hypotheses development

Hypotheses are formulated to test the relationship between the variables (factors) of the study. It is a statement of assumption or prediction of results in a research work that is embarked on. The assumption can be accepted or rejected by the findings of the research. It is mostly adopted in quantitative research techniques using numerical analysis. In this research, null hypotheses are formulated on variables of the study. This covers awareness, knowledge, attitude, subjective norms, perceived behavioural control, religiosity, behavioural intention certification, logistics and *ḥalāl* terms. Thus, null hypotheses were formulated.

### Hypotheses

**H<sub>0</sub> 1:** There is no significant relationship between awareness *ḥalāl* food, knowledge of *ḥalāl* food, attitude, subjective norms, perceived behavioural control, behavioural intention and religiosity, perception of *ḥalāl* certification and logistics possessed by Muslim consumers and their perception of *ḥalāl* food.

**H<sub>0</sub> 2:** There is no significant relationship between demographic factors and awareness, knowledge and perception of *ḥalāl* food among the Muslim consumers.

**H<sub>0</sub> 3:** There is no significant relationship between awareness of *ḥalāl* food, knowledge of *ḥalāl* food, knowledge of *ḥalāl* slaughter, awareness of *ḥalāl* certification, perception of *ḥalāl* certification and logistics of primary food workers and their perception of *ḥalāl* food.

**H<sub>0</sub> 4:** There is no significant relationship between demographic factors and awareness, knowledge and perception of *ḥalāl* food among the primary food workers.

**H<sub>0</sub> 5:** There is no significant relationship between awareness of *ḥalāl* food, knowledge of *ḥalāl* food, perception of *ḥalāl* certification, perception of *ḥalāl* logo and logistics possessed by processed food workers and perceptions of *ḥalāl* food.

**H<sub>0</sub> 6:** There is no significant relationship between demographic factors and awareness, knowledge and perception of *ḥalāl* food among the processed food workers.

**H<sub>0</sub> 7:** There is no significant relationship between awareness of *ḥalāl* food, knowledge of *ḥalāl* food and awareness of *ḥalāl* slaughter of health workers and their perceptions of *ḥalāl* food.

**H<sub>0</sub> 8:** There is no significant relationship between demographic factors and awareness, knowledge and perception of *ḥalāl* food among the Muslim consumers.

### **1.10 Origin of South West Nigeria and Muslim population**

South West is one of the six geopolitical zones in Nigeria which predominantly comprises the variant Yoruba speaking groups. From the overall population of the zone, the Muslims population is reported to be approximately 50% as recorded in the Nigeria 2014 International Religious Freedom Report.<sup>18</sup> With this vast Muslim population, it is imperative to study the state of *halal* food consumption and its production in the region since there are some states or countries across the globe with Muslims minority that are actively and officially engrossed in the embracement and production of *halal* food as a core fundamental of Islāmic tenets. The zones were not entirely carved out based on geopolitical locations but rather by the states with similar culture, ethnic groups and common history. Nigeria is made up of approximately four hundred (400) ethnic groups and 450 languages.<sup>19</sup> There was a need for the government to merge similar groups for effective allocation of resources. This need led to the grouping. The zones were created during the Gen. Sanni Abacha regime.<sup>20</sup> It is considered to be the most educationally advanced geopolitical zone in Nigeria. All the states are grouped into six regions or geopolitical zones based on cultural, ethnic and historical similarities. These are: North Central, North East, North West, South South, South West and South East.

As the region is majorly a Yoruba speaking region, however, there are different Yoruba dialects among the people of the region. All the states in the South West, Nigeria also have common weather condition throughout the year and a period of rain from March to November and a dry season from November to February. The South West States of Nigeria are six.<sup>21</sup> These are: Ekiti, Lagos, Ogun, Ondo, Osun and Oyo States.

**Ekiti State:** This state is known as the Fountain of Knowledge and was carved out of the old Ondo State in October, 1996. Its state capital is the city of Ado Ekiti. The occupation there is predominantly agriculture. The Muslim population in this state as of 1963 population census report was 10.6%.<sup>22</sup> This shows that Muslims population was low in the state. However, the Muslim population has increased to between 30-35% of the populace in recent years.

**Lagos state:** It is known as the Centre of Excellence. It was created in the 27<sup>th</sup> of May 1967 and was the former Capital of Nigeria. The state is made up of Nigerians from all ethnic groups as it is the commercial centre of the country. The capital city of Lagos States is Ikeja. The Muslim population as of 1963 population census report was 56.0%.<sup>23</sup> This shows that Muslim population was higher than the population of the rest religious populations as at then. The Muslim population growth in the state maintains this trend till 2017.

**Ogun state:** Ogun state was created in 1976 with its capital city, Abeokuta. It is known as Gateway State and one of the oldest states in Nigeria. It shares international boundary with the Republic of Benin. The first church built in Nigeria was in Abeokuta and that was St Peters Cathedral by the British mission. According to 1963 population census report, the Muslim population was 53.0%.<sup>24</sup> This shows that Muslim population was higher than the population of the rest religious populations as at then. The Muslim population growth in the state maintains this trend till 2017.

**Ondo state:** Ondo State is known as the Sunshine State. It is also one of the oldest states created from the western states of Nigeria. Its capital city is Akure. The state comprises a substantial amount of traders, farmers and fishermen. The Muslim population as of 1963 population census report was 14.2%.<sup>25</sup> This shows that Muslims were not the majority in the state as at then. However, the Muslim population has increased to between 30-35% of the populace in recent years.

**Osun state:** Osun State is known as the states of Living Spring. It was created from the Oyo State in August 1991. The capital city of Osun State is Osogbo. The state was named after the popular River Osun. The river is a natural spring festival. This festival is one of the biggest and most popular festivals in Africa. It attracts people from all over the world. The Osun-Osogbo grove was awarded a UNESCO World Heritage Site in 2005. The Muslim population as of 1963 population census report was 52.7%.<sup>26</sup> This shows that Muslim population was higher than the population of the rest religious populations as at then. The Muslim population growth in the state maintains this trend till 2017.

**Oyo state:** Oyo State is known as the Pace Setter state. The state was one of the three states created from the defunct Western States of Nigeria. The capital city is Ibadan. There are five major sub-divisions of Yoruba people in Oyo States. These are – Ibarapas, Ibadans, Ogbomosos, Oke-Oguns and Oyos. The University of Ibadan is situated in the heart of the capital (Ibadan) of Oyo State. The Muslim population as of 1963 population census report was 58.3%.<sup>27</sup> This shows that Muslim population was higher than the population of the rest religious populations as at then. The Muslim population growth in the state maintains this trend till 2017.

With the statistical data given above, it is obvious that the Muslims form the larger percentage of the total population of the region from 1960, thereby making and justifying the scope of the study to be considerable.

### **1.11 Chapters outlines**

Chapter 1 of this thesis is the introduction part of the work. It covers the background to the study, statement of problem, objectives of the study, research questions, thesis statement, research methodology, significance of the study, the scope of the study, statement of limitation, and the research framework, hypotheses and origin of the South West, Nigeria.

Chapter 2 of this thesis is the literature review part of the work. The chapter reviews theses and journals on *ḥalāl* awareness, attitude, religiosity, *ḥalāl* certification and logistics, food taste, quality and hygiene as well as government interventions on *ḥalāl* food and *ḥukm shar‘i*. It looks into *ḥalāl* food in the Qur’ān and the *Sunnah*, slaughter in Islām, animal welfare, food processing, food scandals, food additives and additives codes.

Chapter 3 presents the research methodology.

Chapter 4 discusses products and *ḥalāl* conformity. It presents the results from market observations of products on *ḥalāl* manufacturers, *ḥalāl* logos and *ḥalāl* certifiers.

Chapter 5 presents results and discussion.

Chapter 6 presents the summary and conclusion from the findings of the research.

## ENDNOTES

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- 9 Oral interview with Mr Abdu Al Wakil Olaniyan, Manager, Financing Admin, Muslim 'Ummah for South West Nigeria, Iwo Road, Ibadan, Nigeria on 06 Nov, 2017.
- 10 Oral interview with Hajia Lawal K.A., a member of TMC, Ogun State Chapter on 09 May, 2017.
- 11 Oral interview with Alhaji Bello Ḥalāl Standard Development Trust on 11 March, 2019.
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## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Preamble**

This chapter presents the review of theses, journal articles and some works related to *halāl* food concept and its basics. The theses and journal articles on *halāl* food awareness, its certification and logistics, and religiosity were studied to establish the lacuna in the previous works. It reviews the basics of Islamic law and the principles of *halāl* food in the Qur'an and *Sunnah* and contemporary views of modern scholars to establish the basic regulations and standards for *halāl* food. Theories vis a vis influence of Theory of Planned Behaviour (attitude, subjective norms and perceived behavioural control) on *halāl* food consumption, Convention Theory (safety, quality and hygiene) and Hazard Analysis Critical Control Points were reviewed to justify their suitability for adopting them in this work. The vacuum observed makes this research relevant and pertinent.

#### **2.1. Empirical review**

##### **2.1.1 *Halāl* Awareness**

Awareness is found as a significant influencer of Muslims and non-Muslims on their perception of the consumption of *halāl* food as submitted by Ambali, A. R. and Bakar, A. N. (2012) in their research carried out to study people's awareness on *halāl* food products: Potentials issues for policy makers among the Muslims in Malaysia. The paper utilized both quantitative and qualitative methods to extract data from the respondents.<sup>1</sup> They recommended that Malaysian government should further improve their policies and mechanisms to make Malaysian Muslims to be more aware of *halāl* food products.

The research carried out among 480 respondents by Syukur, M. and Nimsai, S. (2018) studied the factors that influence the purchase intention of *halāl* packaged food in Thailand. Using purposive sampling technique, they found out that awareness is an influencing factor which affects the intention of consumption of *halāl* food by the consumers in Thailand.<sup>2</sup>

An exploratory study was carried out by Salman, A. and Siddiqui, K. (2011) to measure the awareness and perception of the Muslims towards *ḥalāl* food in Pakistan, a predominantly Muslim country. The research was carried out among 528 respondents empirically using questionnaire through cluster sampling; the paper measured general awareness of consumers of *ḥalāl* food and their perceptions of it. From their findings, it was submitted that there was very little awareness as regards *ḥalāl* food among Pakistani consumers compared to other Muslim states such as Malaysia and Indonesia.

Using demographic and social-economic factors of the respondents, Ekrem, et al (2014) studied the level of consumers' awareness and perceptions in consumption of *ḥalāl* certified products in Kayseri, middle Anatolian part of Turkey. The research was carried out among 430 consumers through face to face survey method. The findings indicated that demographic and socio-economic factors have fairly effects on the awareness of the consumers of *ḥalāl* certified products. However, *ḥalāl* food certificate and religion are high influencers on the consumers on their awareness of *ḥalāl* food. They suggested that promotions and other various marketing tools should be enforced to increase consumers' awareness of *ḥalāl* food products.<sup>4</sup>

A survey of Muslim consumers' awareness and perception of *ḥalāl* food fraud by Ruslan, A A. et al. (2018) was carried out among 352 respondents from Klang Valley area using quantitative method and analysed descriptively. The results from their findings showed that 96.9% of the respondents were aware of *ḥalāl* food fraud. It was also found that demographic factors- gender, age, level of education and occupation had significant relationship with the consumers' awareness of *ḥalāl* food fraud.<sup>5</sup>

Yusoff, S. Z. and Adzharuddin, N. A. (2017) observed awareness as a factor in searching and sharing of *ḥalāl* food products among Muslim families in Malaysia. The research was carried out among 340 Muslim families in Bangi, Selangor. The data was analysed using descriptive and inferential analyses. The finding indicated that awareness has significant correlation with searching for and sharing of *ḥalāl* food product among Muslim families in Malaysia.<sup>6</sup>

### **2.1.2 Attitude, subjective norms and perceived behaviour**

Abdul Khaleek (2015) wrote on the determinants of consumption of *halāl* food. Her work was on “Generation Y” which refers to the young university students. Her work covers five selected private universities in Klang Valley using quantitative technique. She adopted Theory of Planned Behaviour to carry out the study. She found out that planned behaviours- attitude, subjective norms and perceived behaviour have positive significant influences on “GenerationY” Muslims in the private universities in Malaysia.

It was reported by Alam, S. S. and Sayuti, N. M. (2011) from their research that attitude, subjective norms and perceived behavioural control influence the consumption of *halāl* food. The way and the level which people understand and perceive *halāl* food varies and thus, influences their attitudes. Subjective norms which connotes external influences from family members, peer group, associations or organisations (mosques and *asalatu* gatherings) influence individuals in their consumption of *halāl* food.<sup>2</sup>

According to Mohb, et al (2013), subjective norm is identified to be an influencing factor in consuming *halāl* food as it was demonstrated that the roles of family and friends are significant in the choice of *halāl* food by consumers. The research findings indicated that perceived behavioural control has been found significant in the choice of *halāl* food consumption.<sup>3</sup>

From their findings, Lada, S. et al (2009) found the influence of attitude; and subjective norms as significant in behavioural intention of Muslims in their choice for *halāl* food products. The study was conducted with 485 respondents in Labun, Malaysia by survey study using the Theory of Reason Action. They identified the nature of Malaysian society as collectivist culture. This fortifies the influence of family and society in the behavioural intention of almost every individual. This is because people are inter-dependent in their behaviours and attitudes.<sup>4</sup> Similarly, attitude and subjective norms significantly influence the behavioural intention of Muslim consumers in their consumption of *halāl* food as found from this study.

The influence of attitude, subjective norms and perceived behavioural control was also carried out in Penang using survey method among 184 Muslim respondents. From the



study, Tawfik Muhammad (2008), submitted that the three determinants influence Muslims' intentions in visiting *halāl* restaurants.<sup>5</sup>

### 2.1.3 Religiosity

Religiosity is a state of strict adherence to the teachings of a particular religion in every bit of one's life. Within the context of Islām, religiosity means '*attadayyunu*' التَّدِينُ in Arabic language. Thus, it means the sticking to the practice of Islāmic teachings wholeheartedly and in all aspects of one's life. However, Yusuf Al-Qaradawi (1984) defined religiosity as practising Islām in all aspects of life including '*ibādah*' عِبَادَةٌ (worship), '*al-khalāq*' الخَلَاق (character), '*Sharī'ah*' الشَّرِيعَةُ (legal) and '*aqīdah*' الْعَقِيدَةُ (ideology).<sup>6</sup> Religion affects all other elements of culture vis-a-vis greetings, dressing, music/dance and food. All-port and Ross (1967) were known to be the first academics who attempted to investigate the influence of religion on consumer behaviour followed by many other researchers who studied the role of religion and religiosity on human consumption.<sup>7</sup> As explained above, religion, as an element of culture, affects other elements more influentially than any other factor. Thus, in the sphere of food consumption, religion prescribes the food to be consumed by its adherents and faithful as typically evident in Islāmic food concept prescribing "*halālān tayyiban*" (lawful and good) for Muslim consumption. Therefore, the degree and extent of one's religiosity determines one's attitude towards the consumption of *halāl* food.

Ekrem, E. and Emin, Y. E. (2012) conducted a study in Turkey and demonstrated that Muslim consumers with higher religiosity were more concerned about *halāl* food consumption.<sup>8</sup> In Malaysia, a research conducted on the influence of religiosity or religion reflects that Muslims who are more religious had more positive perception of *halāl* food and more concerned about *halāl* logo when they wanted to consume *halāl* food (Mohani Abdul, et al, 2009).<sup>9</sup>

Atteq-ur-Rahman (2010) submitted from the outcome of his research in the International Islāmic University, Pakistan, among the students that religiosity influenced products acceptance for consumption by Muslim consumers. The religiosity index used to carry out this research covered many dimensions such as ritualistic, intellectual, experiential and ideological items.<sup>10</sup>

The study of Thema (2015) on influence of religiosity on consumer behaviour and perceived psychological and social risk in consumption of food in five countries- Saudi Arabia, Australia, Canada, New Zealand and United Kingdom revealed that intrinsic religiosity variables contributed positive influence towards the consumers' personal psychological and social risk.<sup>11</sup>

Ibrahim, A. (2015) employed qualitative method with interview to explore the reflection of religion in the taste of British Muslim consumers for fast food consumption and their identity construction. The result revealed that British Muslims shared multiple or double identities as Muslims in one hand and as British citizens in the other hand. That is, British Muslims are driven by religion and other social-cultural factors in their choice for fast food.<sup>12</sup>

From the research conducted by Bonne, et al (2007) among 576 Muslim respondents in North Africa, religion was discovered as a determinant of individual's habits in food patronage in society.<sup>13</sup> This calls for a study of *ḥalāl* food administration peculiar to the South West, Nigeria to see the extent that religiosity can affect *ḥalāl* food administration.

Hambali, A. R. and Bakar, A. N. (2012) confirmed that religious belief is a determinant in predicting *ḥalāl* awareness among Muslims. This was revealed by the findings of the study they conducted on Muslims' awareness on *ḥalāl* food and products in Shah Alam.<sup>14</sup>

#### **2.1.4 *Ḥalāl* Certification**

Coupled with other factors, *ḥalāl* certification has been discovered to be a factor that can guarantee consumers' confidence in *ḥalāl* food. This is because consumers will believe that the product labeled *ḥalāl* must have been produced strictly adhering to *ḥalāl* guidelines.<sup>15</sup>

Yousif (2015) carried out a research to study the situation of *ḥalāl* food certification, regulations, standards and practices in Netherlands. He adopted qualitative method and conducted interview among *ḥalāl* certifiers in Netherlands. He defined *ḥalāl* food as food permitted under Islāmic dietary laws and allowed for consumption by Muslims. Thus, he defined *ḥalāl* certification as a process undertaken by a qualified independent

third party organisation to supervise *ḥalāl* production to indicate that these products were produced according to *ḥalāl* standards.<sup>16</sup> This gives guarantee to customers that nothing in the food has any forbidden components in accordance with Islāmic dietary laws. He explained further that *ḥalāl* certification is a process used to control *ḥalāl* food during its production chain e.g raw materials, processing, packaging and storage including transportation and distribution. This certification makes a product globally acceptable by Muslim consumers who will never buy any other products other than *ḥalāl* products and non-Muslims who would prefer *ḥalāl* products wholly for health benefits. Thus, this makes the manufacturers global *ḥalāl* marketers unrestrictedly. Therefore, the certificate is an official document qualifying the food manufacturers to stamp or label their products *ḥalāl* logos. *Ḥalāl* certificated manufacturing industry is thus subjected to periodical inspection, monitoring and supervision by *ḥalāl* food certification body. The *ḥalāl* certification exercise follows some procedures. The first stage is official submission of application for *ḥalāl* certification to *ḥalāl* food certification body giving details of the facilities and operation procedures of the company. The second stage is the review of the application. The review covers technical and Islāmic requirements. The third stage is the inspection of the industry site, equipment, facility and the examination of the food ingredients, additives and other food substances used by the company with secured confidentiality ethics of the auditors or/and certifiers. The fourth stage is the issuance of *ḥalāl* food certificate for the certified industry by the *ḥalāl* food body.<sup>17</sup> However, two certificates are usually issued to the certified company vis-à-vis certificate of the products which covers all the processing procedures till the end of the production. The second certificate is issued on facilities that the company puts in place for *ḥalāl* production (Yousif (2015)). The results of his findings revealed that *ḥalāl* certification in Netherlands is fully controlled by private *ḥalāl* certification organisations and that *ḥalāl* standards and regulations are set by each certification body for its own operation.. There is geographical variation between Netherlands and Nigeria culturally, thus, this study is necessary to be carried out in Nigeria to uncover the situation of the standards of operation of *ḥalāl* food certification bodies in the South West, Nigreria. He recommended that the complete process of production must be controlled in order to ensure that the *ḥalāl* labelled products are really *ḥalāl*.<sup>18</sup>

Hawthorne, E. C. (2015) identified *ḥalāl* certification as labeling a food product as *ḥalāl* after verifying that the food product satisfies the requirements of the certification agency's accreditation of food industry for *ḥalāl* certification. She defined the word *ḥalāl* according to Sociologist John Fischer, whose view corroborates with most contemporary definitions. John Fischer defined *ḥalāl* as an Arabic word which means "good" or permissible and can be applied to a wide range of products and practices that are part of a Muslim lifestyle". She considered ḥalālness of food as the degree to which a meat product is considered *ḥalāl* and identified *ḥalāl* meat as meat that is produced based on the *dhabīḥah* guidelines laid out in the Qur'ān and the *Ḥadīth*.<sup>19</sup>

Hawthorne wrote on Chains in Trust: *Ḥalāl* certification in the United States. Her research was basically on reactions of Muslim consumers towards the recognition of *ḥalāl* food certification in their decision to opt for *ḥalāl* meat consumption in United State of America where many other meats that are non-*ḥalāl* are common in the markets.<sup>20</sup> However, her findings show that Muslim consumers possessed a subjective knowledge on what constitute *ḥalāl* food and the variances pose some challenges to the recognition of *ḥalāl* certification of products in the markets in U.S.A. He considered Muslim consumers as the primary influencers on the relevance of *ḥalāl* certification of *ḥalāl* food products. Her study was limited and applicable to USA environment. Thus, this work is worthy of study since work on ḥalālness of food from various dimensions is very scanty as far as Nigeria environment is concerned. Nigeria as a member of Organisation of Islāmic Congress (OIC) is not yet among *ḥalāl* food exporting countries of the world with large Muslim population because *ḥalāl* food has not taken an organised form.

Marzuk, S (2012) wrote on the expectations of restaurant managers and the position of *ḥalāl* certification in operation in Malaysia. She adopted both quantitative and qualitative techniques with systematic random sampling techniques. A total of 643 copies of questionnaire were administered; and interviews were conducted with 33 restaurant managers in five locations in Malaysia. The findings proved that the restaurant managers have high expectation towards *ḥalāl* certification though, there were different perceptions from the respondents- Muslims and non- Muslims- on food safety, quality, marketing and certification of *ḥalāl* food products.<sup>21</sup>

Certification was indicated as a determinant in predicting *ḥalāl* awareness among Muslims. This was revealed by the findings of the study conducted by Hambali, A. R. and Bakar, A. N. (2012) on Muslims' awareness on *ḥalāl* food products in Shah Alam.<sup>22</sup>

### **2.1.5 *Ḥalāl* logo and logistics**

*Ḥalāl* logistics and the impact of consumers' perceptions were examined by Bruil, R. R. (2010). He studied the logistics in relation to the perception of the consumers how it will affect the price and how the goods will maintain its genuineness to the gross Muslim consumers in Malaysia.<sup>23</sup> He found out that complete separation of leakable *ḥalāl* food from non-*ḥalāl* food fortifies the confidence of the patrons. Also, *ḥalāl* products in carton boxes should also be arranged separately on the shelves where both *ḥalāl* and non-*ḥalāl* products are sold in the same shop. In addition, consumers are ready to pay more for *ḥalāl* products which are distributed in accordance with *ḥalāl* logistics principles.

Omar, W. M. (2017) worked on *ḥalāl* food supply chain in Malaysia's operation towards becoming *ḥalāl* food hub globally. He adopted survey method and administered questionnaire among 240 organisations from 600 *ḥalāl* certified processed food and beverages organisations in Malaysia. Structural Equation Modelling approach was used to analyse the data. The findings revealed that *ḥalāl* food supply chain can positively influence an organisation's marketing and financial performances.<sup>24</sup>

*Ḥalāl* logo is a determinant in predicting *ḥalāl* awareness among Muslims. This is revealed by the findings of the study conducted by Hambali, A. R. and Bakar, A. N (2012) on Muslims' awareness on *ḥalāl* food and products in Shah Alam.<sup>25</sup>

Musa, N. A. (undated) wrote on *ḥalāl* awareness on the existing JAKIM logo in Malaysia as the Malaysia approved logo among other private *ḥalāl* logos; Malaysia is a country that takes *ḥalāl* food consumption as a state religious practice. This awareness is resisted to JAKIM *ḥalāl* logo. Nigeria as a member of OIC also, has a *ḥalāl* logo that many Nigerian Muslims do not recognise or are not even aware of. This makes this research very important.<sup>26</sup> From her research, she found out that the

JAKIM *halāl* logo has significant influence on the awareness of *halāl* food among the consumers.

### **2.1.6 Taste, quality and hygiene**

Ahmad, N. A. (2016) wrote to explore the factors that influence the *halāl* food standard practices in Malaysia. He identified four factors in addition to the Theory of Planned Behaviour as propounded by Ajzen. He identified trustworthiness, food safety, personal hygiene and societal behaviour. He adopted quantitative method. He found out that food safety and trustworthiness (*halāl* status) are the most influencing factors on *halāl* food standard practices. The study was carried out by administering questionnaire among 103 respondents and adopted descriptive and inferential statistical analyses to analyse the data.<sup>27</sup>

Monteiro (2000) studied the factors that influence the decision of patrons to dine at selected Indian restaurants in the Twins Cities. He conducted questionnaire for the study with a sample size of 500 respondents and analysed the findings with descriptive statistical analysis. He identified taste of food, quality of food, hygiene and cleanliness as well as the dish aroma or smell as the top factors that mostly influence the patrons.<sup>28</sup>

It was submitted by Viorean, *et al* (2014) that hygiene, quality and safety expectedly attached to *halāl* food influence the attitude of many consumers of *halāl* food. She iterated that this also appeals to non-Muslim consumers. Non-Muslims consume *halāl* food for health reasons.<sup>29</sup>

The research carried out by Wilson and Liu (cited in Wan, O. M., 2017) revealed that *halāl* food consumption is often attached with health. They supported their findings with the Qur'ānic verse of '*halālan tayyiban* (حَلَالًا طَيِّبًا) which primarily and expressly indicates the wholesomeness of the *halāl* food.<sup>30</sup>

Hambali, A. R. and Bakar, A. N. (2012) on Muslims' awareness of *halāl* food and products in Shah Alam revealed that health reason is a determinant in predicting *halāl* awareness among Muslims. They wrote:

“Muslims view health as having a strong spiritual element, encompassing elements of fatalism. Therefore, once something is deemed *ḥalāl*, it is not a question of whether it can be consumed or not but rather the quality”.<sup>31</sup>

Siti (2017) explored the psychological features of Muslim students in Malaysia public universities in relation to *ḥalāl* food consumption. He stressed that *ḥalāl* food influence the emotion of the students. He applied quantitative method in carrying out the research and the result showed that the students have high level of awareness of *ḥalāl* food consumption; and it also showed that there is the influence of *ḥalāl* food consumption in the students’ emotional status.<sup>32</sup>

### **2.1.7 Government intervention**

Norman (2002) wrote on *ḥalāl* food products produced by Thai in relation to international *ḥalāl* market. Using qualitative method, he looked at the capacity of Thai to supply *ḥalāl* food to *ḥalāl* food global market. He submitted that Thai can supply *ḥalāl* food in greater rate.<sup>33</sup>

Abdul Khaleq recorded that government initiatives influence the management of *ḥalāl* food production, products and consumption in no small measure from Malaysia experience. Establishing her findings, she identifies some government efforts (by Malaysian government) taken towards ensuring that *ḥalāl* food concept is effectively and efficiently managed. The government was said to have established remarkable initiative, the establishment of the *Ḥalāl* Development Industry Cooperation (HDC) on 18 September, 2006.<sup>34</sup> Professor Mohammad Sadek (2012) outlined some initiatives by Malaysian government in creating awareness of *ḥalāl* food consumption to include seminars, conferences, exhibitions and talks.<sup>35</sup> Also, *Ḥalāl-ḥarām* Committee of Focus Group was also formed to deal with *ḥalāl* certification. The Malaysian Standard and Quality News were also published in July 2004 as another important initiative of Malaysian government in managing *ḥalāl* food products in the country. The United States of America also established Islāmic Food and Nutrition Council of America (IFANCA) which plays a significant role in issuing *ḥalāl* certificate and now expanding its way worldwide<sup>36</sup>

Oyelakin (2018) carried out a conceptual study on the prospect of *ḥalāl* products in developing countries, a comparison between Nigeria and Malaysia. He submitted that

Nigeria has the potential to rise as one of the main players in *ḥalāl* industry as Nigeria is the most populous nation in Africa with the second highest number of Muslim population of 78 million (Pew Research Centre, 2016) and enough manpower and natural resources.<sup>37</sup>

### **2.1.8 Slaughter**

Situ (2016) submitted from his study carried out to explore the abattoir operation and Islamic way of slaughtering animal in Abeokuta metropolis that though, the butchers slaughtered the cattle in Islamic way by slaughtering in a single swift slit, they dragged the animals into the slab and slaughtered animals in the presence of other animal contrary to *Sharī'ah* slaughter regulations. This means that there is a need to provide a proper and adequate awareness and education for the butchers on *ḥalāl* slaughter in the region.<sup>38</sup>

Annabi, C. A. and Jinadu Ololade Ahmed, J. O. (2018) studied “*Ḥalāl* beef handling in Nigeria: The Abattoir workers’ perspective.” The study was carried out through telephone interview with only two abattoir workers in Nigeria, a country with cultural and religious differences of the ethnic groups. They submitted that the perception of *ḥalāl* beef handling was based on individual opinion and that there was a general lack of awareness of *ḥalāl* beef guidelines among the workers.<sup>39</sup>

It cannot be an overstatement to conclude from the findings of many theses and research papers reviewed in this study that *ḥalāl* consumption and production are crucial and need to be efficiently managed and coordinated by each country. At present, no research work has given *ḥalāl* food production and consumption a holistic administrative and research approach generally in Nigeria and specifically in the South West, the region of this work. The consumption and production of *ḥalāl* food should be seen as a matter of necessity and collective responsibility of individual Muslims, Muslim organisations and the government. These make this study very relevant in the South West, Nigeria.

## **2.2 Conceptual review**

### **2.2.1 The basics of Islāmic rule of law**

To establish a foundation on what constitutes *ḥalāl* and *ḥarām*, there is a need to illuminate on some conceptual terms in *Sharī'ah*. This segment of the literature study



reviews and presents explanation of *Sharī‘ah*, *ḥukm al-shari‘*, the *maqāṣid al-Sharī‘ah*, the major *madhāhib* in Islām and dwells into what constitute *ḥalāl* food from the Quran, *Sunnah* and Islāmic jurists standpoints.

### **2.2.1.1 Concept of *Sharī‘ah***

The word *Sharī‘ah* is an Arabic word which means legal, law, code or canon, which is laid down by the Lawmaker- Allāh and adopted by Muslims. It takes its form from the root word- *shara‘a* which is synonymised as ‘*sanna*’ which means to legislate, to prescribe, to establish or to enact. *Sharī‘ah* is the Islāmic law that governs the life of Muslims which takes its sources from the Qur’an, *Sunnah*, *Qiyas* and the consensus of the Islāmic jurists. *Sharī‘ah* is defined by Clay Halton (2021) as an Islāmic religious law that governs not only the religious rituals but also aspects of day-to-day life in Islām.<sup>40</sup> *Sharī‘ah* is a fundamental religious concept of Islām and also seen as the expressions of God’s command for Muslims and constitutes a system of duties that are incumbent upon all Muslims. *Sharī‘ah* is considered as a divinely ordained path of conducts that guides Muslims towards a practical expression of religious conviction in this world and hereafter. *Sharī‘ah* is concerned with ethic standard, religious ritual, economic and legal rules.<sup>41</sup> The science of ascertaining the precise terms of *Sharī‘ah* is *Fiqh* which literally means “knowledge/understanding” but conceptually used as a body of knowledge where reasoning is employed to enact law on issues which are not expressly defined in the Qur’an and *Sunnah*. It is referred to as a discipline- “Islāmic Jurisprudence.”<sup>42</sup>

### **2.2.1.2 Al-Maqāṣid al-sharī‘iyyah**

*Al-Maqāṣid* (singular- *qaṣd*) is an Arabic word which means aims, objectives or purposes. *Al-Maqāṣid al-sharī‘iyyah* thus, means the aims or goals of Islāmic law for the realisation of benefits to mankind. The aims and goals of Islāmic law are to secure benefits and protection for the generality of mankind against corruptions, evils, abominations and oppressions.<sup>43</sup>

Ibn Ashur sees *al-maqāṣid al-sharī‘iyyah* as a term that refers to the preservation of order, achievement or wealth and prevention of harm and corruption, establishment of equality among people, causing the law to be revered to become powerful and respected.<sup>44</sup>

*Al-Maqāṣid al-sharī'iyah* is classified into three categories:

1. *Al-Maqāṣid al-darūriyyah* (The essential *maqāṣid*)
2. *Al-Maqāṣid al-hajiyyah* (Complementary *maqāṣid*)
3. *Al-Maqāṣid al-taḥsīniyyah* (The desirable or embellishment *maqāṣid*)<sup>7</sup>

***Al-Maqāṣid al-darūriyyah* (The essential *maqāṣid*):** These are the indispensable *maqāṣid* for the survival and wellbeing of mankind in this world and their success in the hereafter the neglect of which will lead to disruption and disorder and even lead to undesirable end. An instance of this is the prohibition of taking the life of a fellow human being and consumption of alcohol.

#### ***Al-Maqāṣid al-hajiyyah* (Complementary *maqāṣid*)**

This seeks to relieve hardship and difficulty. An instance of this is the verdict of *qaṣr al-salāh* (reduction of number of *rak'ah* of a *salāh*). The burden of observing four *raka'āt* during a long journey and as a stranger or visitor in a place for some days seeks to relieve the *mukallaf*.

#### ***Al-Maqāṣid al-taḥsīniyyah* (The desirable or embellishment *maqāṣid*)**

This takes care of refinement or perfection of human conducts the neglect of which does not disrupt the normal life of people, although, it may lead to lack of comfort of life. Prohibition for consuming non-*ḥalāl* food, covering of *awrah* (nakedness), etc is a verdict enacted to better human wellbeing vis a vis his health and social status.<sup>45</sup>

### **2.2.2. *Ḥukm al-Shari'***

#### **2.2.2.1 Meaning of *ḥukm al-shari'***

*Ḥukm al-Shari'* means the rule of Islāmic law. It consists of three components. These components are the Lawgiver (*Al-Ḥākīm*). The Lawgiver is the Almighty Allāh, the Source of the *ḥukm*. The *maḥkūm fīh* is the act on which the law is imposed, described, encouraged or prohibited such as *ṣalāh*, *ḥājj* and *ṣawm* in '*ibādah* and; divorce, marriage, business and food consumption rules in *ma'malāt*. The *maḥkūm alayh* i.e. *al-mukallaf* is the subject on which the *ḥukm* is imposed. The *maḥkūm alayh* is the Muslim, who is rewarded for the commission or omission of the rule.<sup>46</sup> *Ḥukm al-Shari'* is basically categorised into five groups. These are *al-wājib* (Obligatory rule), *al-nadb* (Recommended act), *al-harām* (Prohibited act), *al-kirāhah* (Disgusting/disapproved/hated act) and *al-ibāhah* (Permitted act). Based on these categories actions are

grouped into *al-ḥalāl* (lawful/permissible) and *al-ḥarām* (the prohibited/the unlawful).<sup>47</sup>

### **2.2.2.2 Al-wājib**

This is the rule of obligation. *Al-wājib* refers to any act that is made compulsory for a *mukallaf* to observe or perform whose omission fetches the *mukallaf* a prescribed punishment. *Al-wājib* is considered as same with *al-fard*. *Al-wājib* is categorised into *al-wājib al-muṭlaq* and *al-wājib al muwaqqit*.<sup>48</sup>

***Al-wājib al-muṭlaq***: This is an obligatory act independent of time. This means that this *wājib* can be observed, performed or fulfilled without time limit. The *maḥkūm alayh-mukallaf* is at the liberty to perform the act at his or her convenient time.<sup>49</sup>

***Al-wājib al muwaqqit or al-wājib al-muqayyad (Timed obligatory act/restricted obligation)***: This act is prescribed to be performed mandatorily at a particular time and ignore of which makes the *maḥkūm alayh-mukallaf* becomes or considered as a sinner. This is also regrouped into *al-wājib al-muqayyad al-ta'jīl*, *al-wājib al-muqayyad al-'adā'*, and *al-wājib al-muqayyad al-qaḍā'*.

***Al-wājib al-muwaqqit or al-wājib al-muqayyad***: This is also divided into *al-wājib al-muwaqqit al-muwassa'*, *al-wājib al-muwaqqit al-mudayyaq* and *al-wājib al-muwaqqit dhu shubhayn*.

### ***Al-wājib al-muwaqqit al-muwassa'***

This is an obligatory duty which is expected to be performed within a wide range of time. Such act can be performed at the early prescribed time or before the prescribed time expires. No punishment is attached to its performance at the tail-end of the prescribed time. Example of such obligatory duty is the daily prayers. A wide range of time is prescribed for each *ṣalāh*. For example, the time for *ṣalāt al-ishā'i* is between sunset and dawn. The prayer of one who performs it immediately after the sunset is not superior to one who performs it at the tail-end of the night to the dawn or vice versa in as much as it is performed within the prescribed time.

### ***Al-wājib al-muwaqqit al-mudayyaq***

This is a *wājib* in which the prescribed time for it is as compulsory as the act itself. The time for such act is not relaxed. Example of this act is *Ramadān* fast. The fast cannot be performed a day to the month of *Ramadān* i.e last day of *Sha'bān* or extended a day after the month of *Ramadān* i.e the first day of *Shawwāl*.

### ***Al-wājib al-muwaqqit dhu shubhayn***

This falls between the *muwassa'* and *mudayyaq*. In this case, there is time limit but the time is relaxed. An example of this act is *al-hājj*. *Hājj* comes once in a year but the time of arrival to Makkah is not mandated to a particular day by Allāh. Also, some rites of *hājj* can be performed in different time or days by different set of people or individuals without one time or day being superior to the other.<sup>50</sup>

Under *al-wājib al-muwaqqit*, comes the rule of *al-adā'*, *al-qadā'* and *al-'i'ādah*

***Al-'adā'u***: This describes an act that is performed or observed within the stipulated time.

***Al-qadā'***: This describes an act that is performed at the stipulated time as a completion of the omitted part of the whole act. An instance of this is when one performs the missed *rak'ah(s)* when one joins a *ṣalāh* e.g. *ṣalāt al-ishā'i*.

***Al-'i'ādah***: This describes an act that is performed outside the recommended or stipulated time.<sup>51</sup>

*Al-wājib* is also grouped into *al-wājib al-'ayni* and *al-wājib al-kifāyah*:

***Al-wājib al-'ayni*** (Universal obligatory act): This is an obligatory duty charged on every individual. Every worshipper must uphold such rite, obligation or duty and an omission of which the violator is liable to the punishment attached to violation of such act.

***Al-wājib al-kifāyah*** (The communal obligatory act): This is a compulsory act which is charged on the whole community but not a duty of a specific individual or group of individuals. Any one or group of individuals can stand to take the responsibility the commission of which every individual member of the community shares the reward. Also, if no one stands to the responsibility, the punishment or consequence is suffered by every individual in the community. *Janāzah* is an example of *farḍ al-kifāyah*. It is expected that a deceased person should be buried. It is the responsibility of the

community but not a specific person. If the corpse is buried, the environment has been secured from epidemic that might arise from the odour of the deceased person if abandoned.<sup>52</sup>

***Al-wājib al-muḥaddad (Determinate obligatory act):*** This is an act whose measure is definitely prescribed. There is a stipulated limit that is expected to be performed by the *mukallaf*. Instances of this are the number of *rak'ah* of the *salawāt al-khams al-mafrūdah*- compulsory five daily prayers and the specific percentage of *zakāh* payable from one's merchandise and the stipulated quantity on which *zakāh* is payable.<sup>53</sup>

***Al-wājib ghari muḥaddad (Indeterminate obligatory act):*** There is no stipulation of limit and /or quantity required of the *mukallaf* to observe. An instance of this is *ṣadaqah*. *Ṣadaqah* has no prescribed measure of any money, property, wealth or asset to be given out to the poor.<sup>54</sup>

***Al-wājib al-mu'ayyanah (Specified obligatory act):*** This is an act whose rule or judgement is expressly mentioned without alternative choice. The verdict for stealing as contained in the Qur'an is amputation of one hand without alternative punishment, if the thief is found guilty.<sup>56</sup>

***Al-wājib al-mukhayyar (The Unspecified obligatory act):*** This is an act or obligation on which several rules are prescribed on its commission for the *mukallaf* to choose one from them. The *takhyir* is on the freedom of selection of the alternative verdicts on such act. Three verdicts are prescribed for any one who compares his wife with his mother in the time of anger. That is, one who swears that if he approaches his wife, henceforth, approaches his mother. Such *mukallaf* is conditioned to free a slave, or fast for sixty days consecutively or feed sixty poor as *kaffarah* (atonement) for the sin. Thus, before such a man can approach his wife thereafter the swear, he must observe any one of the stipulated *kaffārāt* (atonements) prescribed for the sin.<sup>5</sup>

### **2.2.2.3 *Al-mandūb (Recommended act)***

This is a recommended but not binding act. In this case, an act is recommended for a believer the commission of which attracts him/her some reward while there is no punishment to be inflicted on the worshipper for its omission or violation. *Al-mandūb* act can be a recommendation from the Lawgiver- Allāh or from the interpreter- the Prophet. *Al-mandūb* is divided into three:<sup>58</sup>

1 ***Al-Sunnah al-mu'akkadah (Emphatic recommended act):*** This is close to *wajib* in enforcement. It is considered as a condition that must be performed

before an obligation can be carried out e.g the position of ablution to salah. This is in line with the statement: *Kullu mā yatawasal bihi 'ilā iqāmah al-farḍ, yakūnu farḍan* (Every act that serves as a condition to the performance of an obligation is an obligation in itself), i.e *kullu mā lā yatimmu al-wājib illa bihi fahuwa wājib*- an act without which an obligation cannot be completed is an obligation in itself.

- 2 ***Al-Sunnah ghayr mu'akkadah* (Non-emphatic recommended act):** It is equal to *mustahāb*, omission of which fetches no punishment.
- 3 ***Al-Sunnah al-zawā'id* (Extended Sunnah):** This is related to ordinary life of the Prophet like his way of dressing, sitting, eating, the food and drinks he liked to take as well as his relationship with his family, household and neighbours.

#### **2.2.2.4 *Al-Ḥarām* (The prohibited act)**

*Al-ḥarām* refers to prohibited act or substance whose omission can be binding (definite) the commission of which fetches punishment to the perpetrator. The perpetration of *ḥarām* act that is binding is considered as a *kufr* (disbelief). Also, *ḥarām* can be probable as expressed by the Lawmaker- Allāh. The probable is considered as abominable act and classified as *makrūh* the commission of which does not fetch any punishment. *Ḥarām* is divided into *ḥarām li-dhatihi* and *ḥarām li-ghayrihi*.<sup>59</sup>

***Ḥarām li-dhatihi* (Prohibited act for itself):** This is the act that is mentioned as *ḥarām* by origin or its nature. Example of this is pig. Pig is declared as *ḥarām, ab initio*, but not as a result of any external factor like the way it dies or it is killed. Alcohol is declared as *ḥarām* by the Lawmaker *ab initio* but not for external factor.

***Ḥarām li-ghayrihi* (Prohibited for external factor):** This is an act or a thing which is not originally *ḥarām*. That is, such act is *ḥalāl* but becomes *ḥarām* with some conditions. For instance, the consumption of cow is originally lawful but can become *ḥarām* with contamination with external substance like if it is cooked or packed with pork or it is killed through a forbidden way. So, the consumption of cow meat (beef) remains *ḥalāl* if an external factor (*ḥarām*) is avoided.

**2.2.2.5 Al-Makrūh (Disapproved/hated act):** This is a reprehensible act whose commission is frowned at. It is any act whose omission is demanded in a certain term with supporting or probable but not binding evidence to its disapproval.<sup>60</sup>

Some jurists consider *ḥukm shari‘* as *azīmah* (general rule) and *rukḥṣah* (relief- related exemptions). The general rule is relaxed in some situations or conditions. The relaxation of this general rule is considered as relief to subdue a condition of hardship or find a way out of duress. In this regard, *azīmah* is considered as the general rule or the normal and originally prescribed rule on an act of which can be shifted, relaxed or suspended temporarily for a *maḥkūm alayhi* with the condition of *‘iḍtirār* (hardship). Eating of *maytah* (carrion), pork and drinking alcohol is *ḥarām* by *azīmah* but a *maḥkūm alayhi* is relieved of the prohibition, to consume any of them, as the situation warrants it under *‘iḍtirār* (duress or pain). This explains when *ḥarām* food/substance can be consumed. The absence or removal of *‘iḍtirār* retains their initial prohibition.

*Makrūh* is an act that is disapproved, disliked, hated or frowned at. This could be by the Lawmaker-Allāh, the law interpreter- the Prophet as well as the jurists. Some *makrūhat* are considered closed to prohibition by some jurists on the standpoint that- they are acts whose omissions are demanded even though, it is expressed in non-binding term. In this regard, one who commits any of such acts is punished in accordance with the stipulated penalty, however, such perpetrator will not be attributed with *kufṛ* (infidelity or disbelief). Other stated that some *makrūhāt* are merely disliked. In this case, no punishment is levied against any perpetrator or offender but its omission is preferable and better than its commission or observance (Abū Hanīfah’s submission). In this regard, what constitutes *ḥalāl* slightly varies from one school of thought to the other.

#### **2.2.2.6 Al-Mubāh (Permitted Act)**

This is an act that is neither prescribed nor prohibited by the Lawmaker nor the interpreter of the law- The Prophet and the jurists. The rule or principle of *mubāh* is that anything that is not expressly prohibited or described as an abomination by *Sharī‘ah* is permissible- *mubāh*. Thus, any action that there is no evidence that indicates that such act is prohibited is permitted. *Mubāh*, in this regards, is seen as the underlying rule for all things. That is, on the basis of *mubāh*, all things are permissible. *Mubāh* is also referred to as *ḥalāl*. This implies that all things are *ḥalāl* except there is

an underlying rule that indicates that such a thing is prohibited or declared as an abomination. Some scholars consider *mubāh* as a rule close to *wājib* because the commission of such act is demanded but not prohibited by the Lawmaker. *Mubāh* is of commission than prohibition. Allāh says:

“Say I do not see in what is revealed to me anything prohibited except carrion or flowing blood...” Q6:145.

Anything that Allāh does not mention as prohibited and not prescribed or demanded is considered to be permissible. Anything that Allāh is silent about is permissible- *mubāh* and *ḥalāl* except otherwise stated by the Prophet in a clear expression of prohibition.<sup>61</sup>

#### **2.2.2.7 Relativity of *ḥalāl* status**

**Islamic jurisprudential maxim of *al-aṣlu fī al-’ashyā’i al-’ibāḥah* (Permissibility is the origin of things)**

In a situation where there is no clearly stated verdict on a matter the principles of *al-aṣlu fī al-’ashyā’i al-’ibāḥah* is applied by many Muslim jurists. This principle is polarised into two. The first is the principle of *al-aṣlu fī al-’ashyā’i al-’ibāḥah*. That is, all things are permitted by origin. That is, everything created by Allah, in this context, food items, are permissible for human consumption if no clear prohibition is pronounced by Allah or the Prophet (SAW) on such. The principle is used as a legal maxim in *Sharī’ah*. Some jurists hold that whatever Allah is silent about is *rukhhṣah* (relief), and permissible. On this ground, they hold that all actions are permissible unless stated otherwise by Allah or His Messenger.

This jurisprudential maxim is based on the hadith of the Prophet where he said that the silence of Allah on an issue is not by forgetfulness but rather a mercy on the *ummah*. Thus, the *ummah* should not bother to query why or should declare such as unlawful. This is because Allah and His Prophet never remain silent on something that is or could be harmful, destructive or disastrous to the *ummah*. The Prophet said:



" إن الله فرض فرائض فلا تضيعوها ونهاكم عن أشياء فلا تأتوها وحد حدودا فلا تعتدوها  
وسكت عن كثير من غير نسيان فلا تكلفوها . رواه البيهقي " (10/1950)

“Allah has ordained certain duties which you should not miss, and He has forbidden certain things which you should not do, and He has set certain boundaries which you should not trespass, but when He has not mentioned many things, do not look for them”. Narrated by Al-Bayhaqi.

In the second phase of it, other group holds that anything that does not have clean-cut verdict, such an act, action or phenomenon is not recommendable, allowed or encouraged. That is, such action should be discarded and abstained. So, such is considered to be close to *ḥarām*. These legal maxims bring about differences in the regulation status and standard of *ḥalāl* food and poses challenges on *ḥalāl* food status and standard of operation of *ḥalāl* certification bodies and consumers perception of *ḥalāl* food.

### **2.2.3 Schools of thought in Islām (Al-madhāhib)**

Different schools of thought emerged basically between the seventh and eighth century. The schools emerged because many rules in the Qur’an are not binding. That is, they cannot be determined as compulsory obligations since the Lawmaker does not expressly define them. This gives room for employment of reasoning in the interpretation of some rules differently by different jurists. This makes *Sharī’ah* to be a pluralistic system. However, the Prophet said: “Difference of opinion among my community is a sign of bounty”. This substantiates that the need for these *madhāhib* is inevitable in Islām. Within the context of this study, the variances in the jurist opinions renders what constitute *ḥalāl* and *ḥarām* to be relative and flexible.<sup>62</sup>

#### **2.2.3.1 The Maliki school of thought**

Malik ibn Anas (d.795) was a Madinah based imam and Islāmic jurist. The *madhhab* of Imam Maliki is predominantly practised by Muslims in the North Africa, West Africa, , United Arab Emirate, Kuwait, parts of Saudi Arabia and in Upper Egypt.<sup>63</sup>

### **2.2.3.2 The Hanafi school of thought**

The Hanafi School was based in Kuffah established by Abu Hanifah An-Nu'man (d.77). The school of thought has regional roots. The *madhhab* is followed by Muslims in Afghanistan, Pakistan, Turkey, Central Asia, Russia's Muslim community among others.<sup>64</sup>

### **2.2.3.3 The Shafi' school of thought**

The founder of Shafi' School was Muhammad bn Idris al-Shafi' (d. 820). The school was named after him. Shafi' transcended localism in his approach to and application of *Sharī'ah*. He considered the Qur'an and Sunnah as the only authentic sources of law and developed a tool kit of method for a systematic derivation of legal verdict not directly covered by the sacred text with analogical reasoning. His *madhhab* is followed by Muslims in Saudi Arabia, Malaysia, Thailand, Singapore Yemen, Indonesia, among others.<sup>65</sup>

### **2.2.3.4 The Hanbali school of thought**

The *madhab* of Imam Hanbali was founded by Ahmad ibn Hanbali and followed by Muslims in Qatar, Saudi Arabia and minority communities in Syria and Iraq. The majority of the salafis follow Hanbali school.<sup>66</sup>

### **2.2.3.5 The Shi'ah school of thought**

The Shii' school of thought: They are the Ali's allies. Their version of *Sharī'ah* differs from those of Sunnis. It grew out of a fundamentally different politico-religious system where the rulers/imams were held to be divinely inspired and considered as the spokesmen of the Lawgiver.<sup>67</sup>

### **2.2.4.1 Halāl and ḥarām food**

Food is categorised in Islām into *ḥalāl* (lawful), *ḥarām* (prohibited), *makrūh* (disliked/disapproved) and *mushbūh* (doubtful/questionable/unclear).

**Halāl food:** This is the food that is not basically declared as *ḥarām* and fulfilled the regulations of *Sharī'ah* food law in the process of production from farm to table. This is further dwelled into later in this chapter.

**Ḥarām food:** This is the basically prohibited food by the Lawgiver and the products of such.

**Makrūh food:** This is the food that is described as disliked, disapproved or hated to be consumed such as worms and insects.

***Mashbūh* food:** *Mashbūh* food is that which the source or the process of its production is doubtful to be in compliance with *Sharī‘ah* dietary law. Majority of restaurant, eatery, canteen food and industrial food products fall into this category. This is extended to food prepared at individual home using condiments whose constituents cannot be determined as *ḥalāl*.<sup>68</sup>

#### **2.2.4.2 Conditions/manners of food prohibition**

Foods are prohibited under three conditions. These are prohibited per se, prohibited for potential harm and prohibited for defect.

##### **Prohibited per se**

This is by explicit Qur’anic verses where Allāh prohibits some foods without any elucidation of the reasons behind their interdiction e.g flesh of swine, blood, carrion, and animals that are slaughtered not in the name of Allāh as in Q2:173; Q5:3 and Q6:115 are prohibited for Muslim consumption without explaining why.<sup>69</sup>

##### **Prohibited for potential harm**

Allāh prohibits some foods in the Qur’an with explicit education of the reasons behind their interdictions. An instance of this is the prohibition of alcohol Q2:49. Which though, having some benefits for the takers but the harm is greater than the benefit the taker will get from it.<sup>70</sup>

##### **Prohibited for defect**

Allāh declares some food as prohibited in the Qur’an for acquired defect e.g strangled animal is prohibited for improper handling that is, it is not slaughtered according to Islāmic rule (Hassan Ahmad).<sup>71</sup>

#### **2.2.5 *Ḥalāl* and *ḥarām* food in the Qur’ān**

This unit reviews and discusses foods that are *ḥalāl* and those that are *ḥarām* as declared by Allāh and His Prophet. It elaborates the conditions under which the *ḥalāl* food can become *ḥarām*. It explains the jurists’ standpoints on the constituents of *ḥalāl* food and discusses animal slaughter, animal welfare, viewpoints of Islamic scholars on animal stunning prior slaughter and challenges of food in contemporary time.

The verses on *ḥalāl* food establish that Allāh is categorical about the food that Muslims should consume. Thus, *ḥalāl* food is among the *muḥkamāt* (المُحْكَمَاتُ) (fundamentals) in Islām. This shows that the prescription of *ḥalāl* food by the Lawmaker is a strong prescription as a religious obligation even though there are other benefits from the prescription and consumption of *ḥalāl* food. Therefore, in selecting and consuming *ḥalāl* food, intention of the Muslim consumers is a vital factor since it is an act of ‘*ibādah*’ (عِبَادَةٌ) and by which the worshipper will be rewarded by Allāh. It is therefore necessary to analyse *ḥalāl* food by bringing ‘*āyāt*’ (آيَات) of the Qur’ān that basically deal with *ḥalāl* food and *ḥalāl* food consumption with the views of Qur’ānic exegetes. The ‘*āyāt*’ in Q5:1-3 and Q2:172 & 173 deal with *bahīmah al-’an’ām* (بَهِيمَةُ الْأَنْعَامِ) lists of *ḥalāl* animals and *ḥalāl* meat. Under the explanation of these ‘*āyāt*’, related ‘*āyāt*’ on their themes are referred to. Ḥalālness of water animals is treated separately in Q5:99. The Qur’ānic verses that deal with the issue of invoking the name of Allāh (*basmalah* (البِسْمَلَةُ)) before any animal is slaughtered are Q6:118-121. The ‘*āyāt*’ of prohibition of *al-khamr* (الْخَمْرُ) intoxicant are Q2:192, Q4:43 and Q5:93.

Smoking is viewed from scholars’ submissions because there is no clear-cut injunction in the Qur’ān and the *Sunnah* of the Prophet prohibiting its consumption. Thus, scholars’ viewpoints are discussed in this segment.

### 2.2.5.1 *Halāl* animals

#### 2.2.5.1.1 *Bahīmah al-’an’ām*

When legislating dietary laws, Allāh (SWT) addresses the true believers who are expected to understand the message and consider using it as an act of ‘*ibādah*’ (عِبَادَةٌ). Thus, Allāh directs the message on lawful meat to the believers in the first ‘*āyah*’ of *sūrah al-Mā’idah* opening it with:

يَا أَيُّهَا الَّذِينَ آمَنُوا

“O! You who believe...”

Thus, this refers to people who are spiritually and faithfully inclined to Islām, the real and true believers. So, when Allāh intends to recommend, forbid or prescribe a fundamental, ritual or practice, He directs such to the believers since non-believers hardly yield to such instructions. On the issue of the lawful animals, Allāh directs the message to the true believers whom other people at different levels of faith or those

who are not yet Islāmically inclined can emulate. Having arrested the attention of the believers, then, He says:

أُجِلَّتْ لَكُمْ بِهَيْمَةَ الْأَنْعَامِ إِلَّا مَا يُنْتَلَىٰ عَلَيْكُمْ غَيْرَ مُجَلِّي الصَّيِّدِ وَأَنْتُمْ  
حُرْمٌ إِنَّ اللَّهَ يَحْكُمُ مَا يُرِيدُ

“Lawful unto you (for food) are all four footed-animals with the exceptions named but animals of the chase are forbidden while you are in the sacred precincts or in pilgrim garb for God does command according to His Will and Plan.” Q5:1.

The above stated *'āyah* prescribes animals to be eaten by Muslims from among land animals. Some animals are unlawful for Muslim consumption. This is why Allāh singles out *bahīmah al-'an'ām* as the *halāl* animals. He has indirectly proscribed some other land animals.

A clear explanation of *bahīmah al-'an'ām* is required. In analysing the meaning of *bahīmah* بِهَيْمَةً, Qurtub sees it as four footed animals. And *al-'an'ām* to include *al-ibl* (الإبل camel), *al-baqar* (البقره cow) and *al-ghanam* (الغنم goat/sheep).

He submits that the animals are called *al'an'ām* because of their mildly walking styles.<sup>72</sup> Supporting this meaning, Qurtub illustrates it with *'āyah* 5 of *sūrah al-Nahl* thus:

"وَالْأَنْعَامَ خَلَقَهَا لَكُمْ فِيهَا دِفْءٌ وَمَنَافِعُ وَمِنْهَا تَأْكُلُونَ"

Meaning:

“And cattle He has created for you (men) from them you derive warmth and numerous benefits and of their (meat) you eat.” Q16:5

Also, establishing the meaning, Allāh says:

وَمِنْ الْأَنْعَامِ حَمُولَةٌ وَفَرَسًا كُلُوا مِمَّا رَزَقَكُمُ اللَّهُ وَلَا تَتَّبِعُوا خُطَوَاتِ  
الشَّيْطَانِ إِنَّهُ لَكُمْ عَدُوٌّ مُّبِينٌ

“Of the cattle are some for burden and some for meat, eat what God has provided for you and follow not the footsteps of Satan for he is to you an avowed enemy.” Q6:142.

Allāh mentions their categories in *sūrah al'An'ām* thus:

ثَمَانِيَةَ أَزْوَاجٍ مِنَ الضَّأْنِ اثْنَيْنِ وَمِنَ الْمَعْزِ اثْنَيْنِ قُلْ أَلذَكَرَيْنِ حَرَّمَ أَمْ الْأُنثَيْنِ  
أَمَا اشْتَمَلَتْ عَلَيْهِ أَرْحَامُ الْأُنثَيْنِ تَبَيَّنَ لِي بِعِلْمٍ إِنْ كُنْتُمْ صَادِقِينَ

“(Take) eight (head of cattle) in (four) pairs, of sheep a pair, and of goats a pair. Say: Has He forbidden the two males or the two females or (the young) which the wombs of the two females enclose? Tell me with knowledge if you are truthful.” Q6:143.

*Al-'an'ām* are the four footed animals domesticated and pastured or reared by man. However, Qurtub said that lion, tiger and other fighting animals with claws are included among the *ḥalāl* animals by inference since they are also four footed animals even if not domesticated.<sup>73</sup> The *ḥalāl*ness of those animals is restricted by some conditions because one of the conditions is expressly mentioned in the same *'ayah* where Allāh prohibits *al-bahīmah* killed when one is putting on *'ihrām* (إِحْرَامٌ). The other conditions are discussed in *'ayah* 3 of *al Mā'idah*. Reporting from the views of some scholars or narrators of Ḥadīth, he categorised *al-zabḥau* الطَّبْحَاءُ (antelope), *al-ḥamr* (horse) and other four footed animals among *al-'an'ām*.<sup>74</sup> This view was supported by al-Tabari with the views of al Dahak, Qatādah and al-Sa'd among others.<sup>75</sup>

Ibn Kathīr in his own commentary comments that Q5:1 *bahīmah al-'an'ām* refers to *ibl* (إِبِلٌ)(camel), *baqarah* (الْبَقَرَةُ) and *ghanam* (عَنَمٌ) (sheep). He related his submission to Abū al Hasan and Qatādah ibn Jamir among others. He however, pointed it out that the *'ayah* points to *ḥalāl*ness of foetus of the said animals according to the tradition of Ibn Umar and Ibn Abbas among others. Thus, he submits that “*illā mā yutlā 'alayk*” of the preceding *'ayah* (*'ayah* 2) may not necessarily refer to *'ayah* 3 of the *sūrah*. So, he concluded that the last part of *'ayah* 2 refers to other principles or practices that were revealed (by Allāh) or practised by the Prophet.<sup>76</sup>

According to al-Ṣāwī, *bahīmah* includes all four footed animals both on land and in water supporting his view with the dictionary (*qāmūs* قَامُوسٌ) meaning. He submitted that Allāh, the Almighty, makes all four-footed animals (that walk on four legs not crawling) *ḥalāl* without restriction. He thus, considered *'ayah* 3 of the *sūrah* as continuation of the verse and elaboration of the exception mentioned at the end of the

second 'āyah.<sup>77</sup> Qurtub extends the exemption of the second 'āyah of this chapter to cover the prescription by *Sunnah* of the Prophet.<sup>78</sup>

Sayyid al-Sabiq identifies *bahīmah al-'an'ām* to include *al-baqar* (cow), *al-jamus* (الجاموس hippopotamus), *al-ghanam* (sheep), *al-ma'z* (المعز goat), *al-ibl* (camel), *al-zuba'u* (الظباء antelope).<sup>79</sup>

### 2.2.5.1.2 The prohibited meat

The Almighty Allāh categorically mentions the meat of *halāl* animals and animals that are prohibited for Muslim consumption. These are listed out in the Qur'ān thus:

حُرِّمَتْ عَلَيْكُمْ الْمَيْتَةُ وَالِدَّمَ وَالْحُمُّ الْخَنزِيرِ وَمَا أَهَلَ لِغَيْرِ اللَّهِ بِهِ وَالْمُنْخَنِقَةُ  
وَالْمَوْفُوذَةُ وَالْمُتَرَدِّيَةُ وَالنَّطِيحَةُ وَمَا أَكَلَ السَّبْعُ إِلَّا مَا ذَكَّيْتُمْ وَمَا ذُبِحَ عَلَى  
النُّصَبِ وَأَنْ تَسْتَقْسِمُوا بِالْأَزْلَامِ ذَلِكَ فِسْقٌ الْيَوْمَ يَبْسُ الَّذِينَ كَفَرُوا مِنْ  
دِينِكُمْ فَلَا تَحْسَبُوهُمْ وَاحْسِنُوا الْيَوْمَ أَكْمَلْتُ لَكُمْ دِينَكُمْ وَأَتَمَمْتُ عَلَيْكُمْ نِعْمَتِي  
وَرَضِيْتُ لَكُمْ الْإِسْلَامَ دِينًا فَمَنْ اضْطُرَّ فِي مَخْمَصَةٍ غَيْرِ مُتَجَانِفٍ لِإِثْمٍ فَإِنَّ  
اللَّهَ غَفُورٌ رَحِيمٌ

Forbidden for you are carrion and blood, and flesh of swine, and that which has been slaughtered while proclaiming the name of any other than God, and one killed by strangling, and one killed with blunt weapons, and one which died by falling, and that which gored by the horns of some animals, and one eaten by a wild beast, except those whom you slaughter, and that which is slaughtered at the altar and that which is distributed by the throwing of arrows (for an omen); this is an act of sin.

### Q5:3.

With the 'āyah of the Qur'ān on *halāl* food as quoted above, the following are identified as prohibited animals and animal meat:

*Maytah* (ميتة)

Flowing blood

Pork

Animal killed invoking names other than Allāh

Strangled animals

Animal gored to death

Animal that dies by falling from high place or falling into a pit

Animal killed for idols

Animal killed and partly eaten by wild animals/carnivores

The carnivores

Thus, the views of the Qur'ānic exegetes are examined and analysed in this segment of this study.

Qurtub clarified the conditions under which one is allowed to consume *ḥarām* food. These include when one is under deadly hunger condition. That is, if a Muslim has been hungry for days or for a long period of time that his life is already at risk, to save his life, if it is only *ḥarām* food that is available, he is permitted to eat it. When one is under captive, estranged and entangled by enemies of Islām or kidnapper, and offered only *ḥarām* food or compelled to eat *ḥarām* food, he is allowed to eat it. It would be ignorant of him to refuse to eat the *ḥarām* since his refusal may lead to termination of his life by the hoodlums.<sup>80</sup> This is *rukhsah* in *Shari'ah*.

Furthermore, Qurtub explained *al-mutaradiyyah* to include any animal when it is arrowed or shot runs into a river and dies there. He dwells into the explanation of slaughter. He explains the views of some Muslim scholars on animal slaughtering. He states that majority of Muslim scholars define slaughtering as the act of cutting/slitting the *'awdāj* (أَوْدَاجُ) of the slaughtered animal and gushing out of blood from the cut veins. He gives the literal meaning of *dhakāh* الذَّكَاهُ as a fast slit accompany with the intention of killing for the sake of Allāh and the invocation of Allāh's name on the slaughtered animal during slaughtering.<sup>81</sup> The instruments for slaughtering was discussed by Qurtub according to the opinion of the majority of Muslim scholars. He identified the instrument as anything that can swiftly cut the throat of the animal with the exemption of teeth, bones and finger nails which can make blood to gush out immediately after.<sup>82</sup> According to Mālik School of Thought and some other groups, slaughter is not a normal slaughter except by cutting of *al-ḥulqūmah* (throat) and the *al-wadjayn* الوُدَّ جَيْنِ (jugular vein and carotid arteries) both together at once and if an animal is cut above the *ḥalq* حَلْقُ (throat), it is considered inedible for Muslim consumption.<sup>83</sup> To Shafi', he states that slaughtering will be complete or be a total slaughter (acceptable) by cutting of *al ḥulqūm* and *al-mari'* المريءُ (esophagus) only without necessarily cutting the *wadjayn* because he said the *wadjayn* are just passages of food and drinks but not blood passages. He argued that if an animal is cut above the



*ḥalq* it is edible as against the opinion of Mālik since the motive of slaughtering is to drain the flowing blood from the body of the animal.<sup>84</sup>

Three modes of slaughter are recommended in Islām. These are:

***Al-dhibḥ* الذَّبْحُ:** This is also referred to as *al-dhakāh* الذَّكَاءُ. It is translated into English language as slaughter. It is defined as the cutting, particularly, the four parts of the neck of an animal to make it lawful for Muslim consumption. The four parts of the neck are the trachea (*ḥulqum* حُلُقُومٌ), the esophagus (*marīʾ* المَرِيئُ) and the two jugular veins (*wadḡān* الوُدْجَان).

***Al-naḥr* (النَّحْرُ):** This is also known as *al-ʿaqr* (العُقْر). It is translated as stabbing. This is to stab into the jugular vein of an animal at the bottom of the throat.

***Al-ṭaʿn* الطَّعْنُ** (wounding an animal): This is to wound an animal to kill it for consumption. It is allowed during hunting and when the animal grows wild in the process of slaughter.<sup>85</sup>

Ibn Kathīr sees the prohibition of flowing blood from spiritual and health angles. He states that blood is identified to be harmful to the body and filthy and religiously impure as he illuminates on the conditions for ḥalālness of animals killed by hunting dogs or birds stating the different views of contemporary scholars on it. Though Qurʾān simply approves the eating of animal killed by hunting dogs, he establishes that some scholars are of the opinion that if the animal is not torn by the dog either by its teeth or claws, and no life in the animal when it takes it to its owner to enable him slaughter it thus, it should not be eaten by a Muslim since it is parallel to a *maytah* (مَيْتَةٌ). He extends this view to cover animal that is killed with an arrow that if the arrow pierces the animal then it is *ḥalāl* to be consumed by a Muslim but if the animal is hit by the side of the arrow, and dies without the privilege of slaughter, then the animal is parallel to a *maytah*. However, he states the views of other scholars which are contrary to this. He states that the other opinions are the opinions of those who approve the *ḥalālness* of animals killed by hunting dogs even if the animal is not torn or hurt with the teeth or claws and no sign or traces of blood coming out of the animal's body in as much as the dogs does not eat part of it. He illuminates on the opinion of Imām Ahmad on the unlawfulness of the prey of black dog. He states that black dog should not be used for hunting and if used and it kills an animal, the animal

is not lawful for Muslim consumption because he states that black dog is condemned by the Prophet. The Prophet declared and labeled black dog as “*shaytān*” (شَيْطَان). He quoted Ibn Jarīr, who quoted the *ḥadīth* of Salmān al-Fārisiyy on the *ḥalāl*ness of the prey of hunting dog who said that the prey of the hunting dog or bird is *ḥalāl* without conditions or restriction even if the dog/bird eats two third of it before taking it to its owner.<sup>86</sup>

Hāshiyah al-Şāwi details explanation on the meaning of hunting animals as used in the Qur’ān. He takes *al-mukallibin* to mean *al-mursalin* (messengers (sent animals) and *al-jawāriḥ* as gatherers. That is, they are trained animals to hunt or to kill and gather animals for their owners (the hunters). He looks at invocation of the name of Allāh as expressed in the *’āyah* (Q5:3) from two ends. He cited opinion of those who say that the invocation should be uttered as one sends the animal into the bush to hunt. The second opinion is that the invocation should be said when the hunting dog is back and brings the prey to its owner alive. That is, the hunter should slaughter the animal immediately the *mukallib* brings its prey. He considers the remains of partly eaten animal by dog as *ḥarām* since a dog is among the *sab’u السنّع* (carnivores) as submitted by Imām Shafi’.<sup>87</sup> He considers *’āyah* of *sūrah al Mā’idah* as the explanation of the clause “...with the exceptions named...” in the second *’āyah*..

Thus, he submits that the prohibition of the meat of the *ḥalāl* animals was due to the practice of the Arabs of the *jāhiliyah* (جَاهِلِيَّة). The *’ayah* expressly mentions pig as a forbidden animal (for consumption). Thus, Hāshiyah al Şāwi states clearly that the express mentioning of pig as *ḥarām* makes pork automatically *ḥarām* even if it is slaughtered based on Islāmic principles. He explains the word “*ahalla*” as raising of voice invoking name(s) other than Allāh on the animal being slaughtered. He stresses further that if a slaughterer invokes the name of Allāh and other thing or a *waliyy* or shaykh, the name of Allāh mentioned outweighs or supersedes the other names making the meat *ḥalāl* for Muslim consumption. He said this was said to be the practice of *ahl al-kitāb*. But, if the slaughterer is a Muslim then he is considered a backslider or an arrogant (*fāsiq* فَاسِقٌ) and thus, the meat is not *ḥalāl* for Muslim consumption.<sup>88</sup> Allāh equally re-emphasises the prohibited animal and animal meat in *sūrah al-Baqarah* thus:

إِنَّمَا حَرَّمَ عَلَيْكُمُ الْمَيْتَةَ وَالدَّمَ وَلَحْمَ الْخِنْزِيرِ وَمَا أُهْلَ بِهِ لِغَيْرِ اللَّهِ فَمَنْ اضْطُرَّ  
غَيْرَ بَاغٍ وَلَا عَادٍ فَلَا إِثْمَ عَلَيْهِ إِنَّ اللَّهَ غَفُورٌ رَحِيمٌ

“He has only forbidden you dead meat, and blood, and the flesh of swine and that on which any other name has been invoked besides that of God but if one is forced by necessity without willful disobedience nor transgressing due limits then he is guiltless for God is Oft Forgiving, Most Merciful.” Q2:173

According to Qurtub, Allāh expressly prohibits the mentioned meats in the *’āyah*. He points at the word *’innamā* as the baseline as it directly follows Q2: 172, the *’āyah* that recommends all good foods.<sup>89</sup>

The *ḥalāl*ness of foetus is accepted with the slaughtering of its mother except if it is taken out of its mother’s womb alive then its *ḥalāl*ness is based on the fulfillment of the *ḥalāl* requisites of normal lawful animals. That is, if thereafter it dies before it is slaughtered, it becomes *ḥarām* but if it is slaughtered, it is *ḥalāl* for Muslim consumption.<sup>90</sup>

When food or meat is contaminated by a dead mouse, two conditions are related to it. If the rat is drained of the liquid waste of the body, one will only take away the parts touched by the dead rat but if it is fresh, the food it falls on would be considered *ḥarām* completely. Milk of a *maytah* and the eggs are considered *ḥalāl* even though it is inside *maytah* which is *ḥarām* animals. Though, it may be contaminated and becomes *ḥarām* eventually. It is proved as *najs* (نَجَسٌ) by scholars of Shafi‘ because eggs are not hard or covered with hard shells inside its mother which is a *maytah*.<sup>91</sup> *Al-ıđtirār* الاضطرار is the compelling situation. *Ḥarām* food is permitted in such condition. Qurtub analysed the conditions which should be considered as *ıđtirār* as when one is in a dangerous condition that if the *ḥarām* food is not taken as the only alternative, the life of such person would stop. This is allowed under serious oppression or under duress. Nevertheless, the quantity of the food needed to survive is the acceptable or recommended quantity to be consumed. If it is more than that, the excess becomes *ḥarām*.<sup>92</sup> Ibn Kathīr gives similar explanation to Qur’tub commentary on these *’āyatān* أَيَّتَان (two verses).

### 2.2.5.1.3 Prohibition of *al-Khabā'ith* (الْخَبَائِثُ) (The indecent)

This is a general law of prohibition on food. Allāh precisely prohibits any indecent foods for Muslim consumption as He enjoins the consumption of lawful foods that are prepared under strict compliance with Islāmic dietary guidelines. Allāh says:

وَيُحِلُّ لَهُمُ الطَّيِّبَاتِ وَيُحَرِّمُ عَلَيْهِمُ الْخَبَائِثَ

“And He makes lawful unto you the good (foods) and He prohibits for you the indecency.” Q7: 157.

The Prophet said if a *fa'rah* (rat) falls into a liquid like water, butter or fat, if it dies in it, it becomes *ḥarām* but if it does not die in it, the part of the food that is touched by the rat would be raked away. This means that rat (rodent) itself is *ḥarām* for Muslim consumption. This is one of the animals that are not mentioned as prohibited animals in the Qur'ān.<sup>93</sup> According to the views of Abu Hanifah and 'Aḥmad ibn Ḥambal, the vermin (small animals that cause damage and diseases) of the earth such as scorpions, beetles cockroaches, rats e.t.c. are *ḥarām*. They considered rodent among *al-khabā'ith* (filthy animals). Further, the Prophet was quoted to have said:

“There are five animals of which all are evil and should be killed in the *Ḥaram* (Sanctuary of Makkah): crows, kites (a kind of bird), scorpions, rats and vicious dog. Narrated by al-Bukhārī and Muslim from the report of 'Ā'ishah, Ḥafsaḥ and Ibn 'Umar”.<sup>94</sup>

Thus, all rodents are *ḥarām* (حَرَامٌ) whether they are house rats or bush rats. Rat that has been prohibited by the Prophet for Muslim consumption is now detected to be the carrier of deadly Lassa fever.

According to Sayyid Sābiq, the indecencies include *al busāq* البُصَاق (mucus), *al-makhat* المَخَاة (vomit), *al-'arq* العَرَق (sweat), *al-maniyy* المَنِي (sperm), *al-rawth* الرُّوث (feaces), *al-qaml* القَمَل (lice), *al-barghith* البَرِّغِيثُ (flea).<sup>95</sup>

### 2.2.5.1.4 Principles of Basmalah البِسْمَلَةُ

Allāh emphasises the invocation of *basmalah* البِسْمَلَةُ in three places in the Quran. Allāh says:

فَكُلُوا مِمَّا ذُكِرَ اسْمُ اللَّهِ عَلَيْهِ إِنْ كُنْتُمْ بِآيَاتِهِ مُؤْمِنِينَ

“So, eat of (meat) on which God’s name has been pronounced if you have faith in His signs.” Q6:118.

Allāh also says:

وَمَا لَكُمْ أَلَّا تَأْكُلُوا مِمَّا ذُكِرَ اسْمُ اللَّهِ عَلَيْهِ وَقَدْ فَصَّلَ لَكُمْ مَا حَرَّمَ عَلَيْكُمْ إِلَّا مَا اضْطُرَّرْتُمْ إِلَيْهِ وَإِنَّ كَثِيرًا لَيُضِلُّونَ بِأَهْوَائِهِمْ بِغَيْرِ عِلْمٍ إِنَّ رَبَّكَ هُوَ أَعْلَمُ  
بِالْمُعْتَدِينَ

“Why should you not eat of (meat) on which God’s name has been pronounced, when He has explained to you in details what is forbidden to you except under compulsion of necessity but many do mislead (men) by their appetites unchecked by knowledge. Thy Lord knows best those who transgress.”Q6: 119.

The two verses (’āyatān) recommend the invocation of *basmallāh* on food. However, Ḥāshiyah al Sāwi sees it as a condition for edibility of food for Muslim consumption. That is, the name of Allāh should be invoked but if it is not invoked forgetfully, the food is still *ḥalāl* if the name of other thing is not pronounced when the animal is slaughtered. Invocation of the name of Allāh as a condition that makes animal meat to be *ḥalāl* is extended to all food beyond slaughtering as viewed by some Muslim scholars. The positions of *basmalah* are different. Some said it is compulsory like Imām Mālik while some said it is recommended but not compulsory. Al-Shafi‘ School of Thought is of the opinion that the verses make a compulsory recommendation for invocation of *basmalah* in all food but not only on animals that are slaughtered.<sup>96</sup> It expressly stated in ’āyah 121 of the *sūrah* that we should not consume any food (meat) which Allāh’s name is not invoked during slaughter or preparation. Thus, Allāh says:

وَلَا تَأْكُلُوا مِمَّا لَمْ يُذْكَرْ اسْمُ اللَّهِ عَلَيْهِ وَإِنَّهُ لَفِسْقٌ وَإِنَّ الشَّيَاطِينَ لَيُوحُونَ إِلَيْهِمْ لِيُجَادِلُوكُمْ وَإِنْ أَطَعْتُمُوهُمْ إِنَّكُمْ لَمُشْرِكُونَ

“Eat not of (meat) on which God’s name has not been pronounced that would be impiety but evil ones ever inspire their friends to contend with you if you were to obey them you would indeed be pagans.” Q6:121.

Allāh also says:

وَالْبُدْنَ جَعَلْنَاهَا لَكُمْ مِنَ شَعَائِرِ اللَّهِ لَكُمْ فِيهَا حَبِيرٌ فَادْكُرُوا اسْمَ اللَّهِ عَلَيْهَا صَوَافٍ فَإِذَا وَجَبَتْ جُنُوبُهَا فَكُلُوا مِنْهَا وَأَطِعُوا الْقَانِعَ وَالْمُعْتَرَّ كَذَلِكَ سَخَّرْنَاَهَا لَكُمْ لَعَلَّكُمْ تَشْكُرُونَ

“The sacrificial camels we have made them for you as among the symbols from God in them are (much) good for you: then pronounce the name of God over them as they line up (for sacrifice slaughter) when they are down on their sides (after slaughter) eat ye thereof...” Q22:36.

Some said *basmalah* is peculiar to slaughtering alone. Some said it is a general condition for *ḥalāl*ness of any food to be consumed. 'Abū Ḥanifah and Mālik state that if anybody prepares food and deliberately refuses to utter *basmalah* the food or animal killed is not *ḥalāl*. But if it is due to forgetfulness, the food remains *ḥalāl*. Some said even if *basmalah* is forgetfully un-uttered, the animal is not *ḥalāl*. Al-Shafi' said that *basmalah* is *sunnah* so if deliberately or forgetfully un-uttered, the food/meat remains *ḥalāl*.<sup>97</sup> Qurtub considered the 'āyah as a command and covers all food in line with the view of Imām Mālik who was of the opinion that *basmalah* must be invoked to all food but not on only the slaughtered animals. He quoted Mālik to have said it in his *Muwatta'* مَوْطَأْ. He explains five views on 'āyah 121 of chapter 6 of the Qur'an that the 'āyah prohibits the consumption of any food (meat) on which *basmalah* is not invoked during slaughtering or preparation. If such is prohibited, then *basmalah* is compulsory to be pronounced when slaughtering and preparing food.<sup>98</sup> The five views are:

If *basmalah* is forgetfully un-uttered, the food is *ḥalāl* as the stand of Ahmad ibn Hambali.

Shafi stated that if *basmalah* is not uttered, deliberately or forgetfully, the food/meat is *ḥalāl*.

Abdullah ibn Abbas also stated that if *basmalah* is not invoked deliberately or forgetfully, the food is *ḥarām*.

Abdullahi ibn Umar said if *basmalah* is not invoked either deliberately or forgetfully, the food is *ḥarām*.

Al Qadi Abu al Hassan frowned at the *ḥalāl*ness of animal meat if *basmalah* is deliberately un-uttered. But when under duress, the food/meat is *ḥalāl*.<sup>99</sup>

### **Misconception of *Ḥadīth* of *basmalah* on slaughter**

*Haddathanā* Muhammad bn Abdillahi, *haddathanā* Usāmah bn Hafsin al-Madaniy *an* Hishām bn Urwah *an* 'Aishah, *radya* Allah *anha*, *anna qawman qālūli*-Anabiyy *salla* Allah *alayhi* *wa* *sallam*: *Inna qawman*

*ya 'tūnā bi-allahmi, lā nadrī adhakarū isma Allah alayhi am lā? Faqāla: sammū alayhi antum wa kulūhu. Qālat: Wa kānū hadīthi 'ahdin bi-alkufr. (Al-Bukhari, 5507, 9: 748-751).*

**Meaning:**

“Muhammad bn Abdillahi narrated to us, (he said): Usamah bn Hafs al-Madaniy narrated to us from Hisham bn Urwah who heard from Aishah (R.A.) that some people said: O Allah’s Apostle! Meat was brought to us by some people and we are not sure whether the name of Allah was mentioned on it or not (at the time of slaughtering the animals). Allah’s Apostle said (to them), Mention the name of Allah by yourself (on it) and eat it”. (Al-Bukhari, 5507).

This *ḥadīth* was narrated by Aishah R.A. that a group of people brought a meat which they did not know whether the name of Allah was invoked when the animal was slaughtered. In his reply, the Prophet permitted them to say *bismillah wa Allahu Akbar* on it after which they can eat the meat. This *ḥadīth* has generated a lot of discussions with divergent opinions that the *ḥadīth* has simplified the invocation of the name of Allah during slaughter as the *ḥadīth* has been misconceived by many Muslims to have expressly permitted the eating of any meat that the source of which is unknown to the intending consumer(s) and no assurance or certainty whether the animal was slaughtered invoking the name of Allah when the animal was being slaughtered. Some stand that if the name of Allah was not invoked on an animal during slaughtering, the consumer only needs to recite *basmallah* on the meat and eats it. This stands to be a misconception of the principle of *basmallah* in the consumption of animal meat according to *Sharī’ah*. This also brings about the relativity in *ḥalāl* meat (food) status in *ḥalāl* food industry as the *madhāhib* have divergent views on the interpretation of the verses and *ḥadīth* on *basmallah* as a condition for lawfulness of lawful animal meat.

However, the people who brought the case to the Prophet were reported to be from among Bedouin Arabs. That is, the village Arabs who were certainly Muslims. The response of the Prophet relieved the Muslims to eat an animal meat killed by a Muslim who might forget to pronounce *basmallah* when he slaughters. It stands as erroneous interpretation to generalise the application of the hadith to any animal meat even if killed by a non-Muslim or slaughtered on an altar for an idol. One can weakly depend on the misinterpretation of the *ḥadīth* and eat any meat that comes to his way. This scenario was reported at the early stage of Islam when many Muslims were not

acquitted of *Sharī'ah* principles on animal slaughter. It was commented that this *ḥadīth* was abrogated by Qur'an Q6:121 where Allah expressly prohibits the consumption of any *ḥalāl* animal killed on which Allah's name is not mentioned when slaughtered.

### 2.2.5.1.5 Water animals

The status of *ḥalāl* of water animals is illustrated in *sūrah al-Mā'idah* thus:

أُجِلَّ لَكُمْ صَيْدُ الْبَحْرِ وَطَعَامُهُ مَتَاعًا لَكُمْ وَلِلسَّيَّارَةِ وَحُرِّمَ عَلَيْكُمْ صَيْدُ  
الْبَرِّ مَا دُمْتُمْ حُرْمًا وَاتَّقُوا اللَّهَ الَّذِي إِلَيْهِ تُحْشَرُونَ

“Lawful unto you is the pursuit of water-game and its use for food for the benefit of yourselves...” Q5:99.

The above *āyah* deals with the *ḥalālness* of water animals such as fish, crayfish and crab. The prohibited water animals are only those that are said to be poisonous or contaminated with harmful substances. All water animals are *ḥalāl* whether killed by someone who wants to eat or sell them or die of themselves. Also, water animals do not become *ḥarām* by being killed by a non-Muslim. Water animals are not required to be slaughtered in any specific form to make it *ḥalāl*. The flowing blood of fish is considered *ḥalāl* by Muslims scholars such as Ibn al-Arab, 'Abū Ḥanifah and Qurtub. Qurtub establishes it from the position of some scholars of Ḥanafī School of Thought that if the blood of fish dries, it turns white but blood of other animals, if it dries, it turns black. So, they consider flowing blood of fish as *ḥalāl*.<sup>100</sup> Ḥāshiyah al-Ṣāwī relates the view of Imām Shafī' who saw the blood of fish as *ḥarām*. Also, he relates 'Abū Ḥanifah's view who commented that the blood of fish is *ḥalāl*. 'Abū Ḥanifah argues that since if a fish dies of itself, the blood remains in it and dries off, the fish and the blood is consumed. That means, the *ḥalālness* of its (fish) *maytah* is the *ḥalālness* of its flowing blood when slaughtered.<sup>101</sup> Authenticating the *ḥalālness* of all seafood, the Prophet was quoted thus:

The holy Prophet Muhammad said when he was asked by one *ṣaḥabah* who said: O Prophet of Allāh, verily, we embarked on a journey on sea and we have little water with us but if we should use it for ablution, we would



suffer from thirst, then, can we perform ablution with sea water? The Prophet answered- Its water is pure and its carrion is lawful (for consumption). This is related by five of the reporters of Ḥadīth.<sup>102</sup>

#### 2.2.5.1.6 Amphibians and the issue of *ḥalāl*

The amphibians are considered by majority of Islāmic scholars as *ḥarām*. Some scholars deem it lawful by establishing their argument on the basis of all water animals are *ḥalāl* even carrion, regardless of whether such animal can as well cohabit on land. *Al-dafḍā* ‘الضفّضاع’ (frog/toad) is the only amphibian that is unanimously agreed on to be *ḥarām* for consumption on the basis that it includes animals that the Prophet prohibited from being killed except with genuine reason.<sup>103</sup>

#### 2.2.5.1.7 Prohibition of intoxicants/alcohols

The prohibition of *khamr* الخمر took a mild and gradual approach in the Qur’an before it was finally legislated by Allāh as illustrated in the Qur’an. Allāh says:

يَسْأَلُونَكَ عَنِ الْخَمْرِ وَالْمَيْسِرِ قُلْ فِيهِمَا إِثْمٌ كَبِيرٌ وَمَنَافِعُ لِلنَّاسِ وَإِثْمُهُمَا أَكْبَرُ  
مِن نَّفْعِهِمَا

“They ask thee concerning wine and gambling, say: in them is great sin and some profit but the sin is greater than the profit...” Q2:219.

Allāh also says:

يَا أَيُّهَا الَّذِينَ آمَنُوا لَا تَقْرُبُوا الصَّلَاةَ وَأَنْتُمْ سُكَارَى حَتَّى تَعْلَمُوا مَا تَقُولُونَ

“O you who believe approach not prayers with a mind befogged until you can understand all that you say...” Q4:43

Then, Allāh says:

يَا أَيُّهَا الَّذِينَ آمَنُوا إِنَّمَا الْخَمْرُ وَالْمَيْسِرُ وَالْأَنْصَابُ وَالْأَزْلَامُ رِجْسٌ مِّنْ عَمَلِ  
الشَّيْطَانِ فَاجْتَنِبُوهُ لَعَلَّكُمْ تُفْلِحُونَ

“O you who believe intoxicants and gambling ...are abomination of Satan’s handiwork. Eschew such (abomination) that you may prosper.” Q5: 90

*Al-khamr* (الْخَمْرُ) is an Arabic word which indicates any drink that can affect and/or stimulate the functioning of the brain and the nervous system of the taker or drinker. It is also referred to by the Arabs as *al-sukr* (السُّكْرُ). The prohibition of *al-khamr* took a gradual process in Islām. Ibn Kathīr quoted Imām 'Aḥmad who reported a *ḥadīth* on the gradual process of its prohibition to analyse the verses of the prohibition of *khamr*. He said:

Khalf ibn al-Wahid narrated to us, from Abū Ishāq (who heard) from 'Abī Maysarah from 'Umar who said: When the verse of prohibition of alcoholic drink was revealed, he said: O Allāh! Give us a clear and comprehensive explanation on *al-khamr*. Thus, Qur'ān 2:219 was read to him. 'Umar said again. O Allāh! Reveal a clearer explanation regarding the prohibition of this issue of *al-khamr*. Thus, the 'āyah of prohibition of *khamr* (Q4:43) was revealed. The Prophet called 'Umar and the 'āyah was read to him. Whenever the *Iqāmah* الإقامة was made in *ṣalāh*, the *al-munād* المنادى (*iqāmah* reciter) did announce: Let there not approach *ṣalāh* الصلاة he who is drunk. With this, 'Umar reacted and said: O Allāh! Give us an express injunction on the prohibition of *al-khamr* الْخَمْرُ. Thereafter, Allāh revealed the 'āyah in *sūrah al-Mā'idah* giving an outright prohibition of taking of alcohols. When the 'āyah was revealed, the Prophet called 'Umar and the 'āyah was recited into his hearing and when the verse was recited up to “and would you cease from it”, 'Umar said: We would cease from it.<sup>104</sup>

This *ḥadīth* was reported by Abu Dawud, Thirmidh and al Nasā'ī in the same way. However, Qurtub sees the revelation on the prohibition of *khamr* الْخَمْرُ as viewed by some exegetes of the Qur'ān as the beauty of Islāmic legislation which usually takes a gradual, simple and soft approach in both prohibitions and prescriptions. So, such is the process of prohibition of alcohols. There are some benefits in taking alcohols, for example, it serves as source of income for the sellers and the gain is used for their comfort or livelihood. The following are also identified with those who take alcohols excessively: extra boldness and excess or additional strength when it is taken. It aids digestion and sharpens the brain among others. However, the evils are more than the benefits. Logically, the 'āyah is just a subtle approach towards the total prohibition of *al-khamr* telling and sensitising the believers on the prohibition that if something benefits one, and the harms are greater than its benefits, what then is the essence of the benefits such a person enjoys? It is better and advisable to abstain from such a thing.

Allāh systematically introduces a partial prohibition in *sūratul al-Nisā'i* that if the believers were drunk, they should not approach *ṣalāh*. One can deduce a total prohibition from the verse since if one is drunk in the mid-day, he cannot regain his brain or total consciousness for the rest of the day. So, if one is pious, the best option is to abstain from alcoholic drinks completely. When some Muslims still violated the rules of keeping away from *ṣalāh* when they were drunk, the total prohibition was expressly revealed by Allāh in *sūrah al-Mā'idah*. Differences of opinions came from various scholars on the coverage of the term *khamr*. Initially some restricted it to wine made from grape-vine and date palm. However, the different and divergent opinions of scholars were superseded by the authentic *ḥadīth* of the Prophet on prohibition of alcohol for Muslim consumption when he said: “Anything that intoxicates is *al-khamr* (alcohol)”.<sup>105</sup> This is regardless of plants from which it is fermented or extracted.

#### **2.2.5.1.8 When does *ḥarām* food/meat become *ḥalāl*?**

The meat of *ḥarām* animal such as dog, vulture, cat or any other *ḥarām* animal becomes *ḥalāl* for a Muslim only in the case of extreme urgency where a person is threatened with starvation and his life has to be saved. Allāh (SWT) states this in the Qur'ān. Qur'tub sees the permissibility of eating *ḥarām* food as only when one is at a dangerous condition that if the *ḥarām* food is not taken as the only alternative, the life of such person would end.<sup>106</sup> This is allowed under serious oppression or under duress. Nevertheless, the quantity of the food needed to survive is the acceptable or recommended quantity to be consumed. If it is more than that, the excess becomes *ḥarām*. Ibn Kathīr gives similar explanation to Qur'tub's commentary on *idtirār*.<sup>107</sup> Allāh says:

فَمَنْ اضْطُرَّ غَيْرَ بَاغٍ وَلَا عَادٍ فَلَا إِثْمَ عَلَيْهِ إِنَّ اللَّهَ غَفُورٌ رَحِيمٌ

“But whoever is driven by necessity without wilful disobedience nor transgressing due limits, then he is guiltless. Surely, Allāh is Oft-Forgiving, Most Merciful.” (Q2:173).

#### **2.2.6. *Ḥalāl* food in the *Sunnah***

As *Ḥadīth* (and *Sunnah*) is the secondary source of *Sharī'ah* الشريعة, the Qur'ān does give explicit and implicit messages on some fundamentals. Its implicit are explained by the Prophet either by his words or practices or both. Some animals are prohibited

by the Prophet for Muslim consumption and explained the conditions under which the prey of the hunting dog is *halāl* for Muslim consumption. *Sunnah* also stated the conditions under which the meat of animal killed by the hunting instruments should meet before such animal's meat is edible for Muslims consumption.

Sayyid al-Sabiq identifies *halāl* animals by *Sunnah*. According to him *al-khayl* الخَيْل (horse), *al-ḥimār al-waḥsh* الحَمِيرُ الْوَحْشِيُّ (zebra, wild ass or wild donkey), *al-'arnab* الأَرْنَبُ (rabbit), *al-ḍab'u* الضَّبُّ (hyena), *al-jarād* الجَرَادُ (crayfish) and *al-dajjājah* الدجاجة (hen/chicken) are all *halāl* animals.<sup>108</sup>

### 2.2.6.1 *Harām* animals by *Sunnah*

#### 2.2.6.2 Animals prohibited to be killed by *Sunnah*

The Prophet prohibited some animals from being killed for whatever reason, except by mistake or *iqtirār* (unavoidable condition). These animals as listed by Sayyid al-Sābiq include *al-naḥl* النَّحْلُ (bee), *al-namlah* النَّمْلَةُ (ant), and *al-hudhudah* الْهُدْهُدَةُ (hoopoe).<sup>109</sup> The prohibition of the killing of these animals implies the prohibition of their consumption (as meat) for Muslims.

#### 2.2.6.3 Animals required to be killed by *Sunnah*

The holy Prophet Muhammad required the Muslims to kill some animals whenever and wherever they see them as they are regarded to be unwanted. These include: crow, rats, gecto and scorpion.<sup>110</sup>

By *Sharī'ah* thus, this makes the eating of those animals prohibited. The animals as contained in *Bidāyat al-mujtahid wa nihāyat al-muqtaṣad* include *al fa'rah* (الفأرة) rat), *al-had'ah* الهُدَّاءُ (kite/glede (a bird), *al-'aqrab* العَقْرَبُ (scorpion), *al-kalb al-'aqūr* الكَلْبُ الْعُقُورُ dog infected with rabbis- vicious dog) and *al-ghurḍāb* الغُرَضَابُ (crow).<sup>111</sup>

#### 2.2.6.4 Prohibition of reptiles/worms

The Prophet prohibited the eating of the reptiles and animals that live in holes. These include crocodiles, lizards, worms and snakes.<sup>112</sup>

### 2.2.7 Hunting

#### 2.2.7.1 Hunting dog

The prey of hunting dog is *halāl* but becomes *harām* under some conditions. This is clearly explained by the Prophet. The Prophet said:

What a hunting dog brought to you, eat it, for its catching (of the dog) is its slaughter. But if you found other dogs with your dogs and you fear whether the animal is killed by the other dogs even if your dog killed it, do not eat it because you sent your dog(s) to catch invoking Allāh's name on them when you sent them but not on the other dogs". This is contained in *ḥadīth* 5470 of al Bukhārī explained in *Fath al-Bāri*.<sup>113</sup>

It is established that if any dog kills an animal (lawful) but not a trained hunting animal and not sent by a hunter but brought an animal alive, if one is able to slaughter it, invoking Allāh's name, it is lawful for Muslim consumption. The Prophet forbade the consumption of partly eating animal by hunting animals (dogs). He emphasised that the dog has hunted for itself but not for its owners.<sup>114</sup>

#### **2.2.7.2 Use of Arrow**

If arrow is used and the animal was hit by the side of the arrow but not with the pointed edge, the Prophet of Allāh forbade the consumption of such animal. The use of *al-Mi'rāḍ* المِعْرَاضُ (an arrow which does not have pointed edge or it is a blunt arrow) is the same with the rules mentioned above.<sup>115</sup>

If a part is cut away from an animal killed by the use of arrow, the part that is cut away is forbidden while the animal is *ḥalāl* for Muslim consumption. So, if the animal escapes alive, the part that is cut should not be eaten as well. This is not detailed in the Qur'ānic verses of *ḥalāl* animal and *ḥalāl* animal meats.<sup>116</sup>

#### **2.2.7.3 The use of Gun**

The Prophet (SAW) recommended the use of gun for killing animals for Muslim consumption but condemned the use of *al-khadhf* الخَدْفُ for hunting, catching or trapping animals for Muslim consumption. The use of catapult follows the same rules with the use of *al khadhf* الخَدْفُ as explained above except the animal is caught alive and slaughtered.<sup>117</sup>

#### **2.2.8 Animal Slaughter**

Slaughter is a compulsory condition to be observed when an animal is killed for Muslim consumption. Even to naïve Muslims, it is considered the only criterion that makes animal meat *ḥalāl* for Muslim consumption. In Islām, *ḥalāl* slaughter takes two

forms. These are *al dhibh* الذَّبْحُ and *al-dhakāh* الذَّكَاءُ (cutting the animal's throat) and *al-nahr* النَّحْرُ and *al-'aqr* العُقْرُ (stabbing in the neck) to be observed with recommended humane ethics. However, there are other ways people butcher animals for consumption in other religions and societies which are not permissive in Islām. This calls for a look into the various methods to justify the Islāmic slaughter as the only *halāl* method and most hygienic. These include mechanical slaughter, African traditional method of slaughter, Jewish method (*Shechita*) and Christian slaughter.

### **2.2.8.1 Mechanical slaughter**

It is slaughtering of animal with a mechanical rotating blades or with other machine devices. In mechanical slaughter, in some cases, animals are hung upside down. The back legs are tied up with the head of the animal down towards the ground, set to the machine. The machine is then operated to slaughter the animal. This type of mechanical slaughter is alien to Islamic slaughter practice. It violates many Islamic requisites such as making the animal to be slaughter to face the *qiblah*. In the rotating blades, the animals are aligned in roll. The animals are moved across the blades and the rotating blades cut the throat, the carotid arteries and the jugular veins in a single swift slit severing the neck. This type of mechanical slaughter is considerable when other slaughter requisites are upheld. In other cases, the neck of the animal is inserted/plugged into the machine with the animal in standing position. The machine is operated and the animal's throat, the carotid arteries and the jugular veins are cut in a single swift slit by the machine severing the neck.<sup>118</sup> This mechanical practice is also acceptable in Islamic slaughter practice. In mechanical slaughter, some *Sharī'ah* slaughtering ethics such as invocation of the name of Allāh on every animal that is to be slaughtered and avoidance of killing animals in the presence of other animals in the slaughter roll are ignored. *Basmallah* is pronounced once when the machine operator starts the machine to slaughter the animals in roll to sanctify the slaughter in some meat industries who practice mechanical slaughter. In some cases the *basmalah* is recorded in a tape recorder and played till the slaughtering exercise is completed for each of the animals slaughtered to benefit from the blessing of *basmalah*. Majority of jurists accept the practice of mechanical slaughter in meat industry. Mechanical slaughter is practised in big abattoirs and poultries and other occasions where a huge number of animals are slaughtered on daily basis or as occasion warrants it. It should be ensure that the Muslim operator of the machine pronounces *basmalah* on each

animal that is moved to the machine for slaughter and other requisites observed to make animal slaughtered mechanically to be edible for Muslim consumption.

### **2.2.8.2 African traditional method of slaughter**

Sheep or goat is first securely held on its back on the ground by two or three men while the mouth is grabbed tightly and drawn backwards to stretch the neck. Then the slaughterer cuts the throat transversely with a series of stroke half-way deep into the neck. The blood is allowed to drain off until the animal (tightly held) is motionless or dies. The head is then severed off completely. This practice is not in line with Islāmic guidelines for slaughtering animals.<sup>119</sup> The animal passes through strangling in the process of slaughter. Also, cutting the neck of the animal half-deep, adds to death pain suffered by the animal. This is because the slaughterer swipes the neck several times before the animal's neck bone is cut.

### **2.2.8.3 Kosher**

Kosher is the lawful food in Judaism, the religion of the Jew. The Jew attaches a great importance to food consumption and sees it as an aspect of their religion. Guidelines are laid down for preparation and consumption of food. These guidelines are contained in *kashruth* the Jewish dietary law. The opposite of kosher is *treif* (non kosher) which means unclean thus, it is prohibited. Animal slaughter is a strong condition for edibility of meat in Judaism. *Shechita* is thus, the recommended animal method of slaughter. Western Christians do not give much concern to food despite that the Bible is not silent about it. The butcher who kills or sells kosher must be certificated before operation. There are regulatory bodies for kosher. These bodies include Union of Orthodox Jewish Congregations, Organised Kashruth Laboratories, Star-K and the Kof-k. In Judaism, there are differences in what makes a kosher because every branch of Judaism has guidelines that guide its kosher. One faction of Jew does not accept the kosher of the other faction except those approved by the central orthodox rabbi.<sup>120</sup>

### **Kosher guidelines**

Though, the guidelines for kosher differ from branch to branch, the common regulations meet with the following guidelines.

No pronouncement of the name of God in Jewish slaughter guidelines.

A Jew must be the slaughterer.

The object for slaughter must be very sharp,

The animal must be slaughtered in a single swift slit.

The animal must be healthy and alive.

The animal must suffer no injury when it is to be slaughtered and;

The animal should not be stunned prior slaughter.

Kosher meat must be salted and soaked. This is not a condition in Islāmic meat law.

Meat and dairy products must be separated and consumed separately.

Pigs, wild birds, all fishes without removable scales such as sharks, dog fish, catfish, monkfish and similar species are prohibited in Judaism,

Temporary prohibition of some koshers in the time of Passover. Such koshers include wheat, rye, oats and barley.<sup>121</sup>

### **Classes of koshers**

Kosher is grouped into three categories. These are:

Meat products

Dairy and meat

*Pareve (parve)*: This refers to food products that are not meat and milk (dairy) such as egg, honey, fish, etc.<sup>122</sup>

#### **2.2.8.4 Slaughter in Christianity**

The Christians have no specific regulations for animal slaughter like their Jew counterparts. They rest the sanctification of the food and/or animal meat they consume by blessing it in the name of the Son, the Father and the Holy Spirit.<sup>123</sup>

#### **2.2.8.5 Jhatka/Sikh method**

Sikh is the religion practised by Indians. Jhatkah is the slaughter method of the Sikh. When slaughtering animal in accordance to jhatka method the four legs of the animal are strongly tied with long ropes. One man would then hold the ropes of the front legs and another man would also hold the ropes of the rear legs. Thus, the animal is stretched straight. The animal is then hit heavily with a big club killing it at once. The animal is immediately decapitated with a cutlass. However, this is limited to sheep and goats.<sup>124</sup>



### **2.2.8.6 Spiritual killing among the Yorubas**

#### **Spiritual killing in Ogun religion**

In Ogun religion they behead dog for offering. The dog is beheaded with a very sharp cutlass with the fore legs and rear legs tied in pairs and stretched by two strong men.<sup>125</sup>

#### **Spiritual killing in Sango religion**

The Sango worshippers kill a cock for offering with supernatural power. A man would carry the cock and would kneel before a Sango priest from a distance. The priest would invoke some incantations at the cock and exempts the carrier from been killed by the spirit. After several chantings of the incantation, the cock would die on the spot. This way of killing animal is *ḥarām* in Islām. Thus, the meat is inedible for Muslim consumption .<sup>126</sup>

#### **Spiritual killing in Egungun religion**

Goat is beheaded at one hit with a wooden sword in *egungun* religion with supernatural power. This is done in a similar way in the *Ogun* religion. The killing is usually carried out by one of the oldest masquerades who must behead it at a strike. This is *ḥarām* way of killing animals in Islāmic rite.<sup>127</sup>

### **2.2.9 Islāmic slaughter (the *ḥalāl* method)**

In Islām, *al-dhibh* is the recommended way of animal slaughter. The word *dhibh* (slaughtering) is the prescribed method of ritual slaughter of animals excluding locusts, fish and most sea life in *Sharī'ah*. This method of slaughtering animals consists of a swift, deep incision with a sharp knife on the throat, cutting the jugular veins and carotid arteries of both side but leaving the spinal cord intact. The law is derived from the Qur'ān and *Sunnah* of the Prophet. *Bismillahi wa Allāhu Akbar* is uttered before slaughtering it. Slaughter by a sensible adult Muslim is also another condition of slaughter in Islām. *Dhibh* or *dhakāh* is recommended for the killing of cows, goats or rams. With method, the animal is laid on its side while the eyes of the animal are covered. The blood vessels and food passages are severed by a single slit of a sharp knife.<sup>128</sup> Imām Mālik described slaughter as the cutting of *al-ḥulqūmah* and *al-wadjayn* both together at once. He stated that if the animal is slaughtered above the *ḥalq* حلق the meat of the animal becomes *ḥarām* for Muslim consumption.<sup>129</sup> However, Shafi' described slaughtering as the cutting of the *al-ḥulqūmah* and *al-mari'* without

necessarily cutting the *wadjayn*. He stresses that *al-wadjayn* are just food and drinks passages but not blood passages. The instrument for slaughtering is considered to be anything that can swiftly cut the throat of the animal and that blood will gush out immediately with the exemption of teeth, bones, and finger nails.<sup>130</sup> *Al-nahr* (stabbing) is recommended for the killing of camels by Prophet Muhammad (PBUH). According to Sunnah of stabbing, the camel is stabbed, while standing, below its neck with a sharp or long pointed knife or any other slaughtering tool permitted by *Sharī'ah*. That is, the knife is thrust into the hollow area between the neck and the chest of the camel. According to Abu Dawud, the Prophet and the sahabah used to stab camels while standing. The front left leg of the camel would be tie to a tree while the camel stands on the remaining three legs and then stabbed by the slaughterer or the stabber.<sup>131</sup> *Al-ta'n* (wounding) is recommended for bush hunting or *bahimah* (domesticated four-footed mild animal) that has grown wild. The hunted animal must sustain injury or wound such that traces of blood or tear of the animal flesh is noticeable. This will prevent the animal from falling into the prohibited animal that is killed by strangling or hitting with a heavy club or falling from a high place and dies.<sup>132</sup> Some essential ethics are laid down to be observed when animal is slaughtered in accordance to Islāmic rites. The essentials are deduced from the Qur'an, the *Ḥadīth* and the prescriptions of the *fuqaha'u* الفُقَهَاءُ (scholars of Islāmic Jurisprudence- *Fiqh*). These are:<sup>133</sup>

The animal to be killed must be *ḥalāl* animal.

The animal must be alive.

The slaughterer must be a Muslim.

The animal must be slaughtered on the neck cutting the jugular vein, carotid arteries and the throat severing the neck bones.

Allāh's name must be pronounced when slaughtered.

The knife to be used to kill the animal must be sharp.

The animal should be laid facing *qiblah*- East (الْقِبْلَةُ).

The animal should not be killed in the presence of other animals in the death roll.

The slaughterer should ensure that the animal dies completely before any post mortem process is carried out.

### 2.2.10 Animal welfare and *halāl* slaughter

Every bit of a Muslim's actions is considered as an act of *'ibādah* provided it is done for the sake of Allāh. Consumption of *halāl* food entails three concepts vis-a-vis man-Allāh relationship, man-man relationship and man relationship with other creatures (particularly animals in this context). Animal welfare is the position that animal should be treated softly with leniency. This includes proper housing, nutrition, disease prevention and treatment, responsible care, proper handling and humane euthanasia and slaughter. The Animal Welfare Advocates recommended that animal should be treated well so that discomfort is kept to a minimum.<sup>134</sup> It should, therefore, be borne in mind that when slaughtering, one is taking a life only by the permission of Allāh in order to meet the need for food and other uses. The prohibition of *halāl* animal meat because of the way their lives are terminated is not only because blood would not gush out of the animal or because flowing blood is prohibited but rather discourages wicked treatment of animal for consumption and other uses. This prescribes implicitly that animal should be killed in a humane manner. Animal relation is emphasised where Allāh enjoins man to treat animals as humanely as possible from their rearing to the point of slaughtering (under Islāmic rites) them for consumption. This is stated in the Qur'ān as Allāh says:

وَمَا مِنْ دَابَّةٍ فِي الْأَرْضِ وَلَا طَائِرٍ يَطِيرُ بِجَنَاحَيْهِ إِلَّا أُمَمٌ أَمْثَلُكُمْ مَا  
فَرَّطْنَا فِي الْكِتَابِ مِنْ شَيْءٍ نُمْ إِلَى رَبِّهِمْ يُحْشَرُونَ

“There is not an animal that lives on earth none a bird that flies on its wings, but they form communities like you. Nothing have we omitted from the Book, and they all shall be gathered to their Lord in the end.” Q6:38.

Allāh also says:

أَلَمْ تَرَ أَنَّ اللَّهَ يُسَبِّحُ لَهُ مَنْ فِي السَّمَاوَاتِ وَالْأَرْضِ وَالطَّيْرُ صَافَاتٍ  
كُلٌّ قَدْ عَلِمَ  
صَلَاتَهُ وَتَسْبِيحَهُ وَاللَّهُ عَلِيمٌ بِمَا يَفْعَلُونَ

“Do you know not that it is Allāh whose praise all beings in the heavens and on earth do celebrate, and the birds (of the air) with wings outspread? Each one knows its own (mode of) prayer and praise, and Allāh knows well all that they do.” Q24:41

Thus, it is forbidden in Islām to treat an animal cruelly or to kill it except it is needed for food and other uses. The Prophet is said to have inspired the welfare of the animals. This was illustrated in many of his *Ḥadīth*. The Prophet said:

*“Inna Allāha kataba al-’iḥsāna ‘alā kulli shay’in wa ’idhā qataltum fa-’ahsinu al-qitlatah wa ’idhā dhabaḥtum fa aḥsinu al dhibḥatah fal-yaḥudda ’aḥḍukum safratahu wal-yuriḥ dhabīḥatahu.”*

“Indeed, God recommends goodness upon every deed (dealing) so when you kill, kill in good manner and when you slaughter, slaughter in good manner and let everyone of you sharpen his knife (very well) and make the slaughter easy.”<sup>135</sup>

This *ḥadīth* enjoins kindness and mercy towards animals when killing them. We should ensure that the pain is reduced to the minimum. The Prophet also said:

“It is related from Sahl ibn al-Haudhahiyya that the Messenger of Allāh may Allāh bless him and grant him peace once passed by a camel that was so emaciated that its back held almost reached its stomach. He said: Fear Allāh in these beasts who cannot speak.” (Abu Dāwud).<sup>136</sup>

Also, it was narrated from the Prophet thus:

Related from Abu Hurayrah who said: Allāh’s Apostle said: While a man was walking on a road he became very thirsty. Then he came across a well, got down into it, drank (of its water) and then came out. Meanwhile, he saw a dog panting and licking mud because of excessive thirst. The man said to himself: “This dog is suffering from the same state of thirst as I did”. So, he went down into the well (again) and filled his shoe (with water) and held it in his mouth and watered the dog. Allāh thanked him for that deed and forgave him. The people asked: O Allāh’s Apostle! Is there any reward for serving the animals? He said: Yes. There is a reward for serving any animate (living being). (Reported by Bukhāri).<sup>137</sup>

Significant progress in animal welfare did not take place until the late 20<sup>th</sup> century in the Western world. The following are recommended for humane treatment of animals awaiting slaughter at the lairages.

**Resting:** Animal should be allowed to rest for sometime if it must be slaughtered the very day it is conveyed from a long and stressful distance before it is slaughtered. When animals are allowed to rest prior slaughter it adds to the quality of the meat of the animal and aids a complete development of acidity invasion of microbe from intestine. However, the length of the period of resting depends on the species of the animals. Twelve to twenty-four hours is recommended.

**Watering:** The animals should be given enough water to drink at the lairages awaiting slaughter. This reduces microbes in intestines and facilitates skinning.

**Feeding:** The animals should be fed well at the lairages. This gives the animal good appearance, taste and tenderness of meat. The feeding is important for deposition of muscle glycogen.

**Fasting:** The food should be stopped few hours before slaughter. This aids good bleeding and minimises migration of microbes from intestine.<sup>138</sup>

#### **2.2.11 Stunning and *halāl* slaughter**

Stunning is the act of hypnotising an animal prior slaughter to render it insensitive, unconscious or subconscious such that it would not feel the pain of death. This practice is introduced out of humane feeling towards animals. It takes the following forms:

**Captive bolt stunning:** The pistol is fired on the skull of the cow. There are two types of captive bolt stunning. These are penetrating and non-penetrating captive bolt stuns. The penetrating makes the brain to be contaminated with hair, dirt; and bone fragment. These render it inedible for Muslims. Non-penetrating bolt would not enter the skull but when fired and hits the skull, it renders the animal unconscious.

**Electric head stun:** This is done by passing an electric current through the brain of the animal for a few seconds at a regulated voltage to produce unconsciousness. When it is done, it hypnotises the animal.

**Direct blow:** This is done by using a club or pole-axe to hit the cow on the skull with precision and force so that the skull is immediately smashed causing instantaneous unconsciousness.

**Electrified water bath:** This method is used to hypnotise birds in the poultries. Bird is suspended on the shackle (upside down) then the head is intended to come into contact with the water and the passage of electric shock through the brain.

**Carbon dioxide gas stunning:** The use of carbon dioxide is relatively new method of stunning. Basically, animals are stunned using various concentrations of CO<sub>2</sub> in air. It is mostly used in big industries since the equipment is said to be very costly to acquire.<sup>139</sup>

Stunning is considered as unlawful by some Muslim jurists because the animal may die before slaughter and blood may not gush out of the arteries completely as those arteries and the heart that pumps the blood must have been rendered inactive. Therefore, by stunning an animal prior to slaughter, some rites are violated which consequently may render the animal unlawful for Muslim consumption. However, there are some jurists who permit stunning of animal prior slaughter. In stunning an animal before slaughter, The Department of Standard Malaysia specified conditions under which stunning is allowed prior slaughter as stated below.<sup>140</sup>

Slaughtering shall be carried out according to the requirements related to the slaughter of animals in Islām.

The animals shall be alive or deemed to be alive (*hayat al mustaqirrah*) at the time of slaughter

The use of stunning shall be under the supervision of a trained Muslim and periodically monitored by competent Islāmic authority or *ḥalāl* certification authority.

The stunning shall not kill or cause permanent physical injury to the animals.

Gadgets which are used to stun the animals under *maghallazat najis* category shall not be used to stun animals for *ḥalāl* slaughter.

Type of stunning that is recommended is electrical stunning or any other stunning that is permitted by *Majlis Fatwa* (Fatwa council).

The electrical stunner shall be type allowed by the competent authority in charge of slaughter.

The type of stunner used for slaughter of *ḥalāl* animal shall be “head only stunner” type, where both electrodes are placed on the head region.

Electrical stunning of poultry is allowed using “water bath stunner” only.

The strength of current used shall be supervised by a trained Muslim who shall be supervised and monitored by a competent Islāmic authority or *ḥalāl* certification Authority.

### 2.2.12 Smoking:

Although, Allāh does not give a clear-cut *fatwa* فتوى (Islāmic verdict) on smoking, due to its harm to the consumer and people around him, the Islāmic jurists of modern time have by consensus, passed *fatwa* on smoking as being *ḥarām*.<sup>141</sup> The *fatwa* was based on the harm that is infected from smoking using the Qur’ān and *Ḥadīth* of the Prophet to infer the judgment. Allāh says:

وَلَا تُقْفُوا بِأَيْدِيكُمْ إِلَى التَّهْلُكَةِ

“... and make not your own hands contribute to your destruction”. (Q2:195)

Allāh says:

وَلَا تَقْتُلُوا أَنْفُسَكُمْ إِنَّ اللَّهَ كَانَ بِكُمْ رَحِيمًا

“...and do not kill yourselves...” 4:29

Smokers are highly at risk for heart diseases, emphysema, oral cancer, stroke etc. There are hundreds of poisonous and toxic ingredients in the cigarettes that the smokers inhale straight to their lungs. Warning against being the cause of one’s death by oneself, the Prophet stated the penalty for it thus:

“Whosoever drinks poison, thereby killing himself will sip this poison forever in the fire of *jahannam* (Hell).”<sup>141</sup>

Worldwide, tobacco use causes nearly 6 million deaths per year; and current trend shows that tobacco use will cause more than 8 million deaths annually by 2030. Cigarette smoking is responsible for more than 480,000 deaths per year in the United States, including more than 41,000 deaths resulting from second hand smoke exposure. This is about one in five deaths annually, or 1,300 deaths every day. On average, smokers die 10 years earlier than non-smokers.<sup>142</sup> Five major disadvantages of smoking are identified.

1. Danger to the smokers’ health
2. Danger to people around him (as of when he smokes)
3. Noxious smelling,
4. Waste of money
5. Addictiveness.<sup>143</sup>

Some jurists initially viewed it as *mubāḥ* مُبَاهٍ while some viewed it as *makrūh* مَكْرُوه before the general conclusion i.e. *ḥarām* prevails.

### 2.2.13 *Ḥalāl* and *ḥalāl* food from the views of modern scholars

Under this segment, the views of some modern scholars on *ḥalāl* food are reviewed.

Some orientalist conclude that Muslims can take any food and that they only need to say *Bismillah al-Rahmān al-Rahīm* (In the name of Allāh, the Beneficent the Merciful) before eating it even if the food is prepared by non-Muslims and slaughtered in an un-Islāmic way. They argue that many Muslims talk about *ḥalāl* meat without even knowing its Qur’ānic criteria; and that most Muslims who arrive the U.S.A or the “West” in general from other countries or those who convert to Islām in many countries were usually faced by someone who tells them “do not eat but the *ḥalāl* meat”. Thus, they argue that Allāh legalises the consumption of all foods. They stress that God is extremely displeased with those who prohibit anything that was not specially prohibited in the Qur’ān. They take *ḥalāl* as a term which is only used (these days) for commercial profits than religious observance.<sup>144</sup> The argument proves and confirms a shallow knowledge in Islāmic jurisprudence and tends to be misleading to naive Muslims on the phenomenon of *ḥalāl* food. This research focuses on *ḥalāl* food which means, not only meat that must be *ḥalāl*, drinks and other food and all or any meat products must be *ḥalāl* produced under perfect and absolute conditions of *ḥalāl* food guidelines. This research fills this vacuum.

Chaudry defined *ḥalāl* food as food permitted under the Islāmic law (a law based on the Qur’ān, *Ḥadīth*, *Ijma’* اِجْمَاع’ (consensus) and *Qiyās* قِيَاس (analogy) according to Shāfi’ or any one of the Ḥanafī, Mālik or Ḥanbali school of thought or approved by the relevant Islāmic authority. He refers to five major terms used to describe the permissibility of food as stated below.<sup>145</sup>

***Ḥalāl*:** He defined it as permissible and lawful. He states that the term is applied not only to meat and poultry, but also to other food products, cosmetics, and personal care products. The term equally applies to personal behaviour and interaction with the community.

***Ḥarām*:** It means prohibited. He equally sees it as the direct opposite of *ḥalāl*.



**Makrūh:** This is generally associated with anything that is declared by Islamic jurists as disliked, hated or disgusting for Muslim consumption. This is usually something that is not *ḥarām*.

**Mashbūh** (مَشْبُوه): This is something that is not clearly *ḥalāl* and not clearly *ḥarām*. It is something that is doubtful and/or questionable. This might be as a result of the difference in the opinions of the jurists on it. It can also be as a result of undetermined ingredients in a food or food products.

**Dhabīḥah** الذَّبِيْحَة : This is the fifth principle. It is a term which is used by Muslims in U.S for *ḥalāl* meat slaughtered in accordance to Islāmic slaughtering guidelines. He stated that for a food to be *ḥalāl* it must fulfill the following conditions:

The food or its ingredients do not contain any components or products of animals that are not *ḥalāl* according to the *Sharī'ah* or animals which are not slaughtered according to the *Sharī'ah*.

*Ḥalāl* food also means food that does not contain any ingredients that are considered *najs* (نَجْسٌ) (filthy) according to the *Sharī'ah*.

It is not prepared, processed or manufactured using equipment that is contaminated with things that are considered *najs* according to the *Sharī'ah*.

During its preparation, processing, storage or transportation, it should be physically separated from other food that does not meet the requirements stated in items (a), (b) and (c) or things that have been decreed as *najs* by the *Sharī'ah*.

*Ḥalāl* food is also described as contained in Malaysian Trade Description (Definition of *ḥalāl* Order 2011)<sup>146</sup> as food that:

Does not contain any amount of forbidden animal such as pork and has been slaughtered as to *Sharī'ah*.

Does not consist of any elements which is non-*ḥalāl* as to *Sharī'ah*.

Does not intoxicate as to *Sharī'ah*.

Does not contain any part of a human body or its yield.

Is not poisonous or hazardous to health.

Has not been prepared, processed manufactured using any instrument that is contaminated or unclean as to *Sharī'ah*.

Has not been prepared, processed manufactured and stored in contact with or mixed or located close to any forbidden food or substance.

He also elucidates the conditions under which meat would be considered *ḥarām*. Thus, he summarises the categories of *ḥarām* meat that are mentioned in the Qur’ān as follows: Carrion or dead animal, flowing or congealed blood including all its products, animals slaughtered without pronouncing the name of God on them, animals killed in a manner that prevents their blood from being fully drained from their bodies, animals slaughtered while pronouncing a name other than God, intoxicants of all types including alcohols and drugs, carnivorous animals with fangs, such as dogs, wolves or tigers, birds with sharp claws (birds of prey) such as falcon, eagles, owls, or vultures and land animals such as frogs or snakes.<sup>147</sup>

Chaudry identifies the basis of the prohibition of some meats in the Qur’ān as purely and strictly spiritual i.e guidance from Allāh which must be obeyed by all Muslims. He further identifies some reasons for the prohibition deduced by the contemporary scientists.<sup>148</sup> The scientists identified carrion as unfit and unhealthy for human consumption because the decays of dead animals form chemicals which are harmful to humans. The flowing blood is discovered to be dangerous since it contains harmful bacteria and contains product of metabolism and toxins. Swine houses pathogenic worms which if contacted by man is harmful to his health and difficult to cure. Fatty acid composition of pork fat has been identified as incompatible with the human fat and biochemical system. Intoxicants are considered harmful for the nervous system. This affects the nerves and human judgment. In many cases they lead to social and family problems and even loss of lives.

Situ (2016) defined *ḥalāl* food as those that are free from any components that Muslims are prohibited from consuming according to Islāmic law, processed, produced, manufactured and/or stored using utensils, equipment and/or machine that have been cleansed according to Islāmic law; and free from contamination or prepared or processed with anything considered *najs* (filthy)<sup>149</sup>

Qaradawi (1985) pointed out eleven principles of *ḥalāl* and *ḥarām* in relation to consumption of *ḥalāl* food. The principles are recommended to be strictly observed in the course of *ḥalāl* production as basic guidelines.<sup>150</sup>

The first principle is that things are fundamentally *ḥalāl*. This is in accordance to Q2:219 except those that are prohibited with clear evidence from the Qur’ān and *Sunnah*.

Second, he states that Allāh is the only authority who has the exclusive power to legislate the lawful and unlawful. So, the great jurists tried to avoid passing verdict on *ḥalāl* and *ḥarām* because of the fear of wrong interpretation of ruling and wrong perception of issues. They passed verdict based on *Ijtihād* إجتِهَاد and clarified their positions. On this, Imām Mālik said: “I don’t know on issues more than forty different issues.”

Imām Aḥmed bn Ḥambal was also in the practice when consulted and said: “I disapprove of it, it does not appeal to me, I do not like it.”

The third principle is that prohibiting what is *ḥalāl* and/or permitting what is *ḥarām* is equal to the practice of polytheism since fundamental law Maker becomes two entities (God and man).

The fourth principle is that Allāh’s prohibitions are due to impurity and harmfulness of things to human beings. Therefore, the prescription and prohibition of *ḥalāl* and *ḥarām* is for the good of mankind. That is the *maqāṣid al-Sharī‘ah* (مقاصد الشريعة).

The fifth principle states that *ḥalāl* things are sufficient and *ḥarām* things are superfluous for human consumption. This connotes that without taking the *ḥarām* e.g alcohol, *khinzīr* خنزير (pig) and others, man would still get better alternatives which are *ḥalāl* in place of the *ḥarām*.

The sixth principle is that anything or step or action that leads to *ḥarām* is also *ḥarām* such as selling of alcohol. Since alcoholic consumption is *ḥarām*, the selling of it is also *ḥarām*.

The seventh principle is that false presentation of non-*ḥalāl* as *ḥalāl* or *ḥarām* as *ḥalāl* by changing its name is considered *ḥarām*. For instance, alcohol is changed to liquor; obscene dance is changed to art, usury is changed to interest, profit and dividend.

The eighth principle is that good intention does not make *ḥarām* to be *ḥalāl*. An action is considered as ‘*ibādah* عِبَادَةٌ and rewarded when the action is *ḥalāl* and the intention is good.

The ninth principle is the avoidance of the doubtful things. *Ḥalāl* is clear and *ḥarām* is clear and between them are the *shubḥāt* الشُّبُهَات (the un-clear) and should be avoided.

The tenth principle deals with the universality and applicability of *ḥarām* to every consumer. For instance, consumption of alcohol, adultery and fornication are prohibited for Muslims and non-Muslims in respective of their family pedigrees, religious inclination and economic strength among the *ummah*. Though some countries

have legalised adultery, the laws of Allāh do not discriminate between one person and another.

Wahbah al-Zuhayti, in his book *Al-fiqh al-Islām wa Adillatuhum*, discusses *ḥalāl* and *ḥarām* food from Islāmic Jurisprudence perspective with focus on the opinion of the four orthodox schools of thought- Imām Mālik, Abū Ḥanifah, Imām Shafī‘, and ‘Aḥmad ibn Ḥanbali.<sup>151</sup> The author explained the rulings on *ḥalāl* food in the nature that four schools of thought are referenced by the exegetes of the Qur’ān as explained in the review of *ḥalāl* food in Qur’ān and Sunnah section of this chapter. These are literary contributions necessitating practical administration of *ḥalāl* food.

### **2.2.13 Food processing and contemporary challenges**

#### **2.2.13.1. Organic Food and Genetically Modified Organic food (GMO)**

Due to the development in biotechnology, food has been categorised into organic food and genetically modified organic food. Organic food is the food that is produced under pure natural conditions. It is considered as food that is not planted with fertilizers and chemicals, not controlled with pesticides and antibiotics, not processed, not packaged with any injections and does not bring any harms to the consumers and that with all this, still maintains its natural taste, colour, freshness and nutrient. The GMO food is thus, the food that is planted with fertilizers, chemicals, pesticides and antibiotics, processed and preserved with chemicals with which natural nutrient, freshness and taste are reduced or lost. However, most food we consume today belong to GMO group.<sup>152</sup>

#### **2.2.13.2 Food processing**

According to FAO, food processing is perceived in three stages. These are the primary, secondary and tertiary processings.<sup>153</sup>

Primary processing refers to immediate post-harvest handling activities which include drying, threshing or shelling (for grains, cereal and legumes). This is based on plant foods.

Secondary processing or transformation involves some alterations in the form of the foodstuff to facilitate its subsequent use. For grains, legumes and cereal, the processes include parboiling, dehulling, grinding, polishing or splitting into harvest, peeling and slicing for tubers.

Tertiary processing is a stage when food are processed to improve digestibility and to enhance their appeal to consumer. It serves to extend the availability of foods beyond the area and season of production, it permits great diet diversity and gives consumers access to a wider choice of products.

FAO identifies food processing as a form of food preservation from being spoilt with internal reactions between components with water and air, or by the enzymic and toxic effects of growth of micro-organisms.<sup>154</sup> Therefore, it sees the purpose of food preservation as for reducing the extent of deterioration by interfering with those reactions and slowing down the rate of growth of undesirable micro-organisms.

Series of food preservation methods are mentioned, in jugging, for instance, red wine and/or the animal's own blood (flowing blood) is sometimes added to the cooking liquid when preserving meat. This is common with all the systems of preservation. It does not give any of the processes Islāmic perception. The traditional techniques are identified and itemised as curing, cooling, freezing, boiling, heating, sugaring, pickling, lye, canning, jelling, jugging, burial and fermentation.<sup>155</sup> In modern time, the industrial food preservation was developed in research laboratories for commercial applications. These include pasteurisation, vacuum packing, artificial additives, irradiation, pulsed electric, field electroporation, modified atmosphere, non-thermal plasma, pascalisation, bio preservation and hurdle technology.<sup>156</sup>

W.H.O. is a specialised agency of the United Nations that is concerned with international public health of which one of its focuses in nutrition is food safety and healthy food for human consumption. WHO observes five keys to "safer food". The five keys are as follows:

Separation of raw food from cooked food

Cooking food thoroughly to the appropriate temperature

Keeping cooked food at safe temperatures both for serving and storage.

Using of safe water and

Using safe raw materials

WHO states that ensuring food safety starts with production, at the farm level. WHO warns against misuse of agro-chemicals, including pesticides, growth hormones and veterinary drugs as it may have harmful effects on human health. It states that food safety requires due attention during harvest, transport, processing, storage and finally

during food preparation and storage by consumers. It identifies food quality with positive and negative attributes that influences a product's value to the consumer. The positive may be the origin, colour, flavour, texture and processing method of the food while negative attributes may be visible spoilage contamination with filth, discolourant or bad odour or taste. It identifies food safety as distinct from food quality ensuring the removal or limiting hazards, chronic or acute, that may cause food to be harmful to the health of the consumer. WHO has concern for production, handling, storing, and preparing food in such a way as to prevent infection and contamination in the production chain, and to ensure that food quality and wholesomeness are maintained to promote good health. WHO recommends the application of HACCPs, a process control system that identifies where hazards might occur in the food production process; and put into place stringent actions to prevent occurrence of hazards. So, by strictly monitoring and controlling each step of the process, there is less chance for hazards to occur.<sup>157</sup>

NAFDAC, one of the Nigeria Food organisations was established by Decree 15 of 1993 as amended by Decree 19 of 1999 and now The National Agency for Food and Drug Administrative and Control Act cap N1 Laws of The Federation of Nigeria, 2004 to regulate and control the manufacture, importation, exportation, distribution, advertisement, sale and use of food, drugs, cosmetics, chemical, detergent, medical, devices and packaged water (known as regulated products). NAFDAC thus, defines food as any article manufactured, processed, sold or advertised for use as food or drink for human consumption. NAFDAC is in charge of licensing and registration of food premisses and other products, importation and exportation of food. It bans unhygienic products and closes their premises. NAFDAC sees into health control of food handlers and ante-mortem and/or post-mortem examination of animals. In modern food industry, NAFDAC enforces food additive regulations, food irradiation regulations, pesticide and other contaminant regulations. It does not operate in line with *ḥalāl* principles.<sup>158</sup>

The Federal Ministry of Health as a sector in food monitoring and supervision unit has the responsibility for formulating national policies, guidelines and regulations on food hygiene, safety as well as monitoring their requirements. It is also responsible for establishing guidelines for requirements for the nutritional use of food and monitoring of food environment. Its regulations do not consider *ḥalāl* dietary principles.<sup>159</sup>

### **2.2.13.3 *Halāl* food preparation**

*Halāl* food preparation must follow the following conditions:

The worker must be healthy and free from wounds particularly in the hands and other exposed parts of the body.

The workers must always wear clothes that protect their body and cover their mouths and noses to avert contamination.

The environment for the production of *halāl* food must be clean from vermin and repulsive animals such as flies, cockroaches, lizards and rats to avoid contamination.

The equipment must be clean and be washed immediately after use.

Washroom facility must be provided.

Hazard critical control point must strictly be observed in the course of production.

Conveyance of goods must be safe from contamination.

The workers who have direct contact with the food preparation must be trained to understand the guidelines of *halāl* food production.<sup>160</sup>

### **2.2.13.4 Food scandals**

Records reveal that a lot of fraudulent acts are observed in food production as many fake food products are sold intentionally by the producers to consumers as genuine foods which cause diseases and sicknesses to the consumers. Pauli Poisuo identified ten strange and fascinating food scandals as listed below:

- i. Mud pepper was discovered in China.
- ii. White pepper was made from flour and ground mud (black pepper) by a manufacturer when there was a high demand of pepper in the market. However, it was established that the fake products cannot kill anyone, still the fact remains that the spices sold were not the original.<sup>161</sup>
- iii. Sugar water was also discovered to be sold as apple juice. This counterfeit product was discovered with a company- the Beech-Nut Nutrition Corporation in 1981. The product was said to be 100% counterfeit. The product was just sugar water with some syrup for flavour. Yet, it was marketed as 100 percent apple juice.<sup>162</sup>
- iv. Fake eggs were found in a Chinese food industry, a food item that seems impossible to counterfeit. A mixture of resin, starch, coagulant, and pigments make up the egg white and the yoke and shaped into a perfect egg with a mold.

Then, the 'egg' is dipped in an amalgamated paraffin wax, gypsum powder and calcium carbonate to create its shell.<sup>163</sup>

- v. Lead paint is discovered to have been added to papinka pepper to add to its colour and its weight. People unconsciously eat lead paint. This practice was identified with Hungemma food/spices sellers to fetch them more money. This was discovered when dozens of people started to fall sick and a few even died.
- vi. Irradiated cereal is an adulterated food which is harmful for human consumption. This was a deliberate decision since the food was given to school children of the Walter E. Fernald State School.
- vii. In 1993 MIT- Massachussets Institute of Technology and Quarker Oats (a food company) participated in the radio-active breakfast cereal to school children and in 1993 MIT regretted that proper procedures for consent were not followed in the experiment. The scandal was declassified in 1993.<sup>164</sup>
- viii. Chinese meat producers used rat meat for ram meat knowing that rat meat is forbidden for Muslim consumption.<sup>165</sup>
- ix. Tainted oil was introduced to market in Spain and caused a strange new deadly disease. The tainted oil was extremely localised such that it was not discovered as fake oil. Six hundred people died before health officials managed to locate the cause to be tainted oil.<sup>166</sup>
- x. Exploding watermelons: This food scandal was recorded in China in 2011 in Jiangtsu Province. The blast ranged from simple splitting and cracking to full grenade-like explosions. This was caused by a chemical used to boost the crops by farmers. This is called Forchlor-fenuro. Watermelons are extremely sensitive to the chemical.<sup>167</sup>

#### **2.2.14. Additives**

Food additives are defined as substances added to food to maintain or improve the safety, freshness or appearances of food. WHO defines food additive as substance not normally consumed as a food by itself and not normally used as a typical ingredient of the food whether or not it has nutritive value. Additives can be added to food during preparation, treatment, packing, packaging, and transporting such food. Food additives include colouring, emulsifiers, flavour, flavour enhancer, flour treatment agents, glazing agents, humetants, tracer gas, preservative, stabilizers, sweeteners thickeners and caffeine. There are some of these additives that their *halāl* status cannot be



determined while some of them are outright *ḥarām*. Some of these additives are also dangerous and harmful to human health. This leads to the control of daily intake of such dangerous additives by prescribing critical limit for its addition to a food. Therefore, there is a need to expose the Muslim consumers to the *ḥarām* and *ḥalāl* doubtful and the dangerous additives as further discussed in this chapter.<sup>181</sup>

**2.2.14.1 Flavouring agent:** These are additives that are added to improve food aroma or taste such as enzymes, coloring and non-sugar sweeteners. Enzymes are naturally occurring proteins that boost biochemical reactions by breaking down larger molecules into their smaller building blocks. They can be obtained by an extraction from plants or animals or micro-organisms such as bacteria and are used as alternatives to chemical based technology. These are mainly used in baking (to improve the dough), for manufacturing fruit juice (to increase yeasts) in wine making and brewing (to improve termination) as well as in cheese manufacturing (to improve curd formation). The use of food additives is regulated with supervision by a joint body of WHO and FAO (JECFA -Join Expert Committee of Food Additives). JECTA makes recommendations of the level of additive to be added to a particular food at the level that it would not affect the consumers and suggests Additives Daily Intakes (ADI) for safe consumption.<sup>182</sup>

## **2.2.14.2 Codification of additives**

### **2.2.14.2.1 Pig fat and emergence of codification**

Pig fat is not maintained but coded in western countries including Europe where the primary choice for meat is pig. There are lots of pig farms in Europe and France. In France alone, pig farms account for more than 42000. Pig has the highest quantity of fat than any other animals but European and Americans try to avoid fats. Formerly, about 60 yrs ago, it was burnt. When it was considered to be wasting of resources, they used it to make soap. Fat was later chemically processed, packed and marketed and sold to companies. Thus, European states made it a rule that every food, medical and personal hygiene products should have the ingredients listed on its cover. So, this ingredient was listed as 'pig fat'. The products that contained pig fat thus, were banned by the Islāmic countries at the time. This resulted in trade deficit for the Europe. They later developed the idea of coating bullets with pig fat which had to be scratched with teeth before using them. When the Muslims soldiers and some vegetarians got this,

they refused to fight. The European government then stopped to write pig fat on any products that contain pig fat. Instead, they wrote animal fat. The European authority was thus, challenged by Islāmic states of what animal fat. They dubiously claimed the animals to be cow and sheep. The products were again banned because the cow and sheep were claimed to have been slaughtered under un-Islāmic guidelines or practices. This made their sales to drop as 75% of their income comes from selling their goods to Muslim countries. They finally decided to start coding language so that only their departments of food administration would know what each code stands for.<sup>183</sup>

#### **2.2.14.2.2 Additives E- Number**

E-Numbers represent specific food additives used by the food industry in manufacturing of various food products. The E-Numbers have been formulated by the European Economic Community (EEC) and are universally adopted by the food industry worldwide. E-numbers are reference numbers used by the European Union to facilitate identification of food additives. ‘E’ stands for Europe or European Union. Normally, each additive is assigned a unique E-number but occasionally related additives are given an extension (‘a’, ‘b’, ‘c’ or ‘i’ s‘ii’) to another E-number.<sup>184</sup>

#### **2.2.14.2.3 Convention for assigning E-number**

Food colours: 100-199

Preservatives: 200-299

Antioxidants phosphates and complexing agent: 300-399

Thickeners, gelling agents, phosphates, humectus, emulsifier: 400-499

Salts and related compounds: 500-599

Flavor enhancers: 600-699

Not used for food additives (used for feed additives): 700-899

Surface coating agents, gases, sweeteners: 900-999

Miscellaneous additives: 1000-1399

Starch derivatives: 1400-1499.<sup>185</sup>

#### **2.2.14.2.4 Additives extracted from *ḥarām* animals**

E120: CDchineal: It is of a red colour obtained from female insects.

E441: Gelatine: It is derived from the bones and/or hides of cattle or pigs.

E542: Edible bone phosphate: an extraction from animal bones.

E904: Shellac (a resin from the lac insects).<sup>186</sup>

#### **2.2.14.2.5 Some food additives dangerous to health**

WHO identifies some dangerous and toxic preservatives such as formalin solution used by some fish handlers which gives fish a special smell but injurious for consumption. Likewise, carbon monoxide gives red meat a fine red colour but reducing the meat quality.<sup>187</sup> This is marketing deceit, tricking consumers to buy low quality food as high quality food. Other dangerous additives are:<sup>188</sup>

##### **1 Artificial sweeteners**

Aspartame (E951) is popularly known as Nutrasweet and Equal. It is found in foods labeled “diet” or sugar-free. It is believed to be carcinogenic and account for more reports of adverse reactions than all other additives combined. Aspartame is a neurotoxin and carcinogen. It is known to affect intelligence and effects short-term memory. The components of this toxic sweetener may lead to a wide variety of ailments including brain tumor, diseases like lymphoma, diabetes, multiple sclerosis, chronic fatigue, emotional disorder like depression and anxiety, attacks, dizziness, headaches, nausea, mental confusion and seizures. These additives are added to many foods such as sugar-free sodas, diet coke, zero coke, sugar-free gum, baking goods, Table top sweeteners, cereal, breath mints, ice tea, chewable vitamins and toothpaste.

##### **2 High Fructose Corn Syrup (E: HS Code 17026090 India )**

This is a highly-refined artificial sweetener. It has been identified as number one source of calories in America. It increases LDL (“bad”) cholesterol levels and contributes to the development of diabetes and tissue damage among other harmful effects. This is commonly found in processed food, bread, candy, flavored yogurts, salad dressings, canned vegetables, cereals among others.

##### **3 Monosodium Glutamate (Msg / E621)**

MSG is an amino acid used as a flavour enhancer in soups, salad dressings, chips, and many restaurant foods. MSG is known as an excitotoxin, a substance which over excites cells to the point of damage or death. Studies show that regular consumption of MSG may result in depression, eye damage, fatigue, headaches, disorientation and

obesity and can as well affect the neurological pathway of the brain. It is found in many snacks, chips, cookies and seasonings.

#### **4 Trans Fat (E: n.a.)**

It is used to enhance and extend the shelf life of food products. It is among most dangerous substances that one can consume. It is formed by a process called hydrogenation. It increases LDL (bad) cholesterol levels and decreases HDL ('good') cholesterol which increases the risk of heart attacks, heart diseases and strokes and contributes to increased inflammation, diabetes and other health problems. It is used in preparing margarine, chips, crackers, baked goods and fast foods.

#### **5. Common food dyes**

This is capable of contributing to behavioral problem in children and leads to significant reduction in Intelligent Quotient (IQ). It is an artificial colouring and found in soft drink, cereal, candy and it can also cause chromosomal damages. They include:

Blue #1 and blue #2 are coded (E133)

Red dye #3 is coded (E124)

Yellow #6 is coded (E110)

Yellow Tartraizne (E102)

#### **6. Sodium Sulfite (E221)**

According to the FDA, approximately one in 100 people is sensitive to sulfites in food. Majority of sensitive people to sodium sulfites are asthmatic. It is found in wine and dried fruits.

#### **7. Sodium Nitrite (E 250)**

It is regarded as a widely toxic ingredient. It is highly carcinogenic. It is found in corned beef, bacon and smoked fish.

#### **8. BHA and BHT (E320)**

Butylated Hydroxyanisole (BHA) and butylated hydrotoluene (BHT) are preservatives found in cereals, chewing gum, potato chip and vegetable oils. It keeps food from changing colour, flavour or from becoming rancid. They are oxidants which cause

cancer. They are found in enriched rice, jello, gum, cereal, frozen sausage as well as potato chips.

### **9. Sulfur Dioxide (E220)**

Sulfur Dioxide is additive and toxic; and it causes bronchial problems particularly to those prone to asthma, hypotension (low blood pressures), anaphylactic shock, e.t.c. It is found in soft drink, juices, cordials, wine, vinegar, beer, among others.

**10. Potassium Bromate (E924):** It is an additive used to increase the volume in some white flour, bread, rolls, small amount of it in bread can cause cancer. It is found in bread.

#### **2.2.14.2.6 Additives with *doubtful Halāl status* identified by their codes**

E-120 Cochineal or carminic acid

E-124 Ponceau 4R or cochineal red A

E- 912 Montan acid esters (for surface treatment of citrus fruits)

E-304 (i) Ascorbyl palmitate, (ii) ascorbic stearate

E-312 Dodecyl gallate

E-322 Lecithin

E-542 Edible bone phosphates (used as anticaking agent)

E-430 Polyoxyethylene (8) stearate

E-431 Polyoxyethylene (40) stearate

E-432 Polyoxyethylene (20) sorbitan

E-433 Polyoxyethylene (20) sorbitan mono-oleate (polysorbate 80)

E-434 Polyoxyethene (20) sorbitan

E-435 Polyoxyethene (20) sorbitan

E-436 Polyoxyethene (20) sorbitan tristearate (polysorbate 65)

E-322 Lecithins

- E-442 Ammonium phosphatides
- E-344 Glycerol esters of wood rosins
- E-495 Sorbitan monopalmitate
- E-542 Edible bone phosphate (bone meal)
- E-570 Fatty acids
- E-572 Magnesium stearate
- E-620 L-Glutamic acid (a natural amino acid)
- E-621 Monosodium glutamate (MSG)
- E-622 Monopotassium glutamate
- E-623 Calcium diglutamate
- E-624 Monoammonium glutamate
- E-625 Magnesium diglutamate
- E-640 Glycine and its sodium salt (a natural amino acid)
- E-912 Montan acid esters
- E-920 L-Cysteine hydrochloride (a natural amino acid)
- E-422 Glycerol
- E-951 Aspartame
- E-1105 Lysozyme
- E-1518 Glyceryl triacetate<sup>189</sup>

#### **2.2.14.2.7 E-numbers that contain pig fat**

Some additives are produced from pig fat but not deliberately disclosed but rather represented with E-codes on the lists of ingredients contained in the labels of such products. This is to deceive Muslim consumers and lure them to purchase *ḥarām* food products inadvertently. Some of the ingredients are listed below:

- E-470a Sodium, potassium, and calcium salts of fatty acids
- E-470b Magnesium salts of fatty acids
- E-471 Mono-and diglycerides of fatty acids
- E-472a Acetic acid esters of mono-and diglycerides of fatty acids
- E-472b Lactic acid esters of mono- and diglycerides of fatty acid
- E-472c Citric acid esters of mono- and diglycerides of fatty acids
- E-472d Tartaric acid esters of mono-and diglycerides of fatty acids
- E-472e Mono- and diacetyl tartaric esters of mono-and diglycerides of fatty acids
- E-472f Mixed acetic and tartaric acid esters of mono- and diglycerides of fatty acids
- E-473 Sucrose esters of fatty acids
- E-474 Sucroglycerides
- E-475 Polyglyderol esters of fatty acids
- E-476 Polyglycerol esters of polycondensed esters of casto oil (polyglycerol polyricinoleate)
- E-477 Propane- 1,2-diol esters of fatty acids
- E-478 Lactylated fatty acid esters of glycerol and prone-1,2-diol
- E-479b Thermally oxidized soybean oil interacted with mono-and diglycerides of fatty acids Sodium stearoyl-2-lactylate
- E-482 Calcium stearoyl-2-lactylate
- E-483 Stearyl tartrate
- E-491 Sorbitan monostearate
- E-492 Sorbitan tristearate
- E-493 Sorbitan monolaurate

E-494 Sorbitan monooleate

E-904 Shellac<sup>190</sup>

### **2.2.15 *Ḥalāl* logos**

Nowadays, there are many processed foods (industrial food products) in the markets. Also, few goods are now labeled *ḥalāl* certified. Therefore, the industries' activities needed to be regulated and controlled in line with *Sharī'ah* food regulations. The Muslim consumers needed to be safeguarded from purchasing non-*ḥalāl* foods but likely labeled *ḥalāl* certified and also non-Muslims who might have taste for *ḥalāl* products. Thus, the researcher surveyed some food products in the markets to identify the products that are *ḥalāl*-labeled, the industries that produce the products and the *ḥalāl* certification bodies that certified the food industries to establish the originality of the *ḥalāl* status of the food and the *ḥalāl* certificate of such industries. This chapter presents the market findings of the study.

Labeling a food product with *ḥalāl* logo indicates that the product was processed under strict compliance with *Sharī'ah ḥalāl* food guidelines distinguishing such product from non-*ḥalāl* products. And that the company has been certified as *ḥalāl* food manufacturer by a recognised *ḥalāl* food certification agency or body. It equally guarantees the consumers the *ḥalāl*ness of the products they consume. So, the logos have influence in the decision of Muslim and even non-Muslim consumers of *ḥalāl* food products. It suggests *ḥalāl* compliance of the manufacturer of a product. However, as there are 44 countries that are internationally certified *ḥalāl* authorities, every organisation has its own unique *ḥalāl* logo. Some of the logos are shown below.



### 2.2.15.1 Nigeria *halāl* logos

Nigeria *halāl* logos are included in the *halāl* logo chart of the world. Fig. 2. 1 shows the *halāl* logos for *halāl* certified products.



**Fig 2.6: Nigeria *halāl* logos.**

Source: *Halāl* Research Council. Retrieved Dec. 14 2018

These Nigeria *ḥalāl* logos do not possess *ḥalāl* inscriptions as that of most other countries' *ḥalāl* logos. The logo with GreenBles has Arabic letters *hā'u* and *lām*, the first two letters of the word "*ḥalāl*." These letters are written in such a way that only an expert in Arabic language can easily identify them. The second logo contains crescent, a usual Islāmic symbol. It does not portray any sign to identify it as *ḥalāl* food logo as well. Moreover, no *ḥalāl* products of the local ḥalāl-certified food industries carry any of these Nigeria *ḥalāl* logos that are displayed here as observed in the market survey. Equally, these *ḥalāl* logos cannot be linked with any *ḥalāl* certification organisation in Nigeria.<sup>191</sup> This is an indication that *ḥalāl* food certification is not yet accepted by the Nigerian government even though the private *ḥalāl* certification bodies are already operating at embryonic levels.

### 2.2.15.2 *Ḥalāl* logos of other countries

For identification of *ḥalāl* food products in the markets, awareness and familiarisation with the world *ḥalāl* logos is imperative. Some of the world *ḥalāl* logos are shown below.



**Fig 2.7: *Ḥalāl* logos of other countries**

Source: *Ḥalāl* Research Council. Retrieved Dec. 14 2018

### **2.2.15.3 Importance of *ḥalāl* logo**

Standardisation of *ḥalāl* food logo ensures the following.

It makes the source of the food traceable.

It reveals the certifying organisation.

It reveals the strength of the firm or its reliability.

It proves that the product is certified *ḥalāl* in the first instance.<sup>192</sup>

### **2.2.16 International *ḥalāl* market**

*Ḥalāl* food market has witnessed a rapid growth at the international market in the recent years. Most leading countries in *ḥalāl* global markets are countries with Muslim minority. The receptiveness of *ḥalāl* products and its rapid growth birthed many *ḥalāl* food certification bodies in various parts of the world. Some major *ḥalāl* players are listed in this segment of the study and two major *ḥalāl* food players are examined to juxtapose Nigeria position in *ḥalāl* market.

#### **2.2.16.1 Some international *ḥalāl* certification bodies with Muslim minority**

United States *ḥalāl* certification

Brunei *ḥalāl* certification

Philippines *ḥalāl* certification

Thailand *ḥalāl* certification

Indonesia *ḥalāl* certification

Singapore *ḥalāl* certification

Australia *ḥalāl* certification

New Zealand *ḥalāl* certification

South Africa *ḥalāl* certification

U.K. *ḥalāl* certification.<sup>193</sup>

**Table 2:1 Largest Muslim Population**

Indonesia	Egypt	Algeria
Pakistan	Iran	Morocco
India	Nigeria	Sudan
Bangladesh	China	Afghanistan
Turkey	Ethiopia	Iraq
<b>Highest Purchasing Power in <i>halāl</i> food market</b>		
Saudi Arabia	Russia	Algeria Singapore
Turkey	France	Indonesia
Iran	Libya	Egypt
Malaysia	UAE	The Netherland
Qatar	USA	

Source: Global Islāmic Finance Report (GIFR) (2013), *Halāl* Food Information Center (2016)

### **2.2.16.2 Importance of *ḥalāl* food certification**

*Ḥalāl* food certification has been found to have the following benefits.

It gives guarantee to the consumer that they actually buy *ḥalāl* products.

It conditions the manufacturer to produce with strict adherence to Islāmic *ḥalāl* guidelines.

It qualifies a producer as an exporter of *ḥalāl* food.

It reduces fraud in *ḥalāl* food sector.

It reduces chances of food contamination.<sup>194</sup>

### **2.2.16.3 Challenges facing *ḥalāl* food operation in the global *ḥalāl* market**

Numerous *ḥalāl* food certification bodies with diverse *ḥalāl* production guidelines and standards is a salient problem in *ḥalāl* market locally and globally. This creates a big confusion for the *ḥalāl* food operators in selection of *ḥalāl* food certification body to rely on. This lead to the situation of taking more than one *ḥalāl* food certificates to ensure that the products of the *ḥalāl* food operator are authentic, original and reliable. Many of the *ḥalāl* certification bodies are established by non-governmental organisations. So, these bodies are independent and set their own *ḥalāl* food standards. These gives room for fraudulence in *ḥalāl* food industries both from the certification bodies and the *ḥalāl* food operators who might issue fake *ḥalāl* logos and certificates. Cases of *ḥalāl* food products are inevitable in this situation. Most of the *ḥalāl* food players are non-Muslim majority countries. This can posit a big challenge to the originality of the *ḥalāl* certification and *ḥalāl* products from such countries. The products my witness a bad scenario since most of the products may not pass through any laboratory test to ascertain their authenticity and originality. No central global *ḥalāl* certification or accreditation body to oversee and checkmate the activities of the various *ḥalāl* food certification bodies to guarantee trust in *ḥalāl* food products globally. This is a challenge for *ḥalāl* food operators who are sincerely holding genuine *ḥalāl* certification and consciously and curiously stick to the Islāmic dietary law. Fake *ḥalāl* logos in the market pose a big threat to *ḥalāl* food operators. Cases of intentional mislabeling of non-*ḥalāl* products with *ḥalāl* logos are traceable in the market.<sup>195</sup>

#### **2.2.16.4 Emergence of *ḥalāl* meat in Europe**

The food and specifically the meat of the people of the Book is not unlawful for Muslim consumption, but the fear for/of being contaminated with non-ḥalāl meat or substance that is considered lawful for the People of the Book is not removable in food and meat production among the Europeans. *Ḥalāl* food and meat products with *ḥalāl* stamp thus, began in the West especially in France in 1960s with the Muslim immigrants from North Africa to Europe such as France and others. In 1970s, *ḥalāl* meat shops were mainly owned by families and were pigeonholed as ethnic and exotic shops. The patronage of the Muslim butchers by Muslims was also based on the trust of personal reputation and being that such Muslim butchers were members of the community.

Health crisis or outbreak of diseases- mad cow and foot-and-mouth in 1990s was also a strong catalyst towards the spread of *ḥalāl* food/meat patronage as the meat industry resulted to *ḥalāl* slaughter/ritual slaughter to avert the diseases since the ritual slaughter is considered safe, quality and hygienic. The abattoirs under public pressure were equipped to produce *ḥalāl* meat. Muslim specialist butchers began to develop locally and gradually globally in the agri-food business. Thus, *ḥalāl* became a commercial quality label.<sup>196</sup>

#### **2.2.16.5 *Ḥalāl* food operations in Malaysia and U.K**

##### **2.2.16.5.1 *Ḥalāl* food operation in Malaysia**

Malaysia is a Muslim dominated country with about 64% of her populace being Muslims. Malaysia operates *ḥalāl* food consumption as a government policy. She sees into the supply and the processing of *ḥalāl* food into and in Malaysia. JAKIM (Jabatan Kemajuan Islām Malaysia) is the *ḥalāl* certification body in Malaysia. The body is established, owned and controlled by Malaysia government. It is the main and central certification body. However, apart from JAKIM, there are also *ḥalāl* certification bodies at state level. The state *ḥalāl* certification bodies in Malaysia operate under the auspices of JAKIM standards and are typically owned by Malaysia government.<sup>197</sup>

##### **2.2.16.5.2 *Ḥalāl* food operation in U.K.**

Muslims are minority in U.K. This minority Muslims are able to sustain the operation of *ḥalāl* food market and strengthen the certification body as their demand for *ḥalāl*

meat and *halāl* meat products remains constant and on the increase as U.K. Muslims increase on daily basis.

*Halāl* Food Authority (HFA) emerged as the certification body for UK *halāl* operation when demand for *halāl* meat became an important issue among U.K. Muslims. Before the formation of HFA, Muslims who were conscious of the meat they consumed opted for kosher meat- the meat slaughtered by the people of the Book- as it was considered a better alternative to other available slaughtered animal meat. The major *halāl* certifying body in U.K. is the *Halāl* Food Authority. This *Halāl* Food Authority is not government agency and remains under the supervision and control of independent organisation.

Article 9 of EU Convention of Human Rights permits freedom of religion this makes the introduction of *halāl* food operation and patronage possible for the minority Muslims in EU and particularly in U.K. *Halāl* food consumption started with animal meat in U.K. The rapid and continuous increase in Muslim population led to increase in demand for *halāl* meat couple with the fact that most Muslims in U.K. are Sunnis. Thus, they hold firmly to the upholding of Quran and Sunnah and cannot consume any animal meat other than that which is slaughtered according to Quran and Sunnah. U.K. slaughter guidelines approves animal stunning prior to slaughter. However this can render the animal unconscious and can kill the animal before slaughter. This makes the animal to become *maytah* which is prohibited for Muslim consumption. With this situation *halāl* food operation is not unnecessary. *Halāl* food shops are operated by individuals. The materials for animal meat and other ingredients were produced and supplied by farms owned by individuals.<sup>198</sup>

#### **2.2.16.6 Nigeria potential in global *halāl* market**

Nigeria is endowed with five strong factors that guarantee her prospects in the global *halāl* food supply and patronage. These factors are: large cultivable land, rivers, agriculture favourable climate, enormous workforce and large size of Muslim population. Land is one important factor in food production. Nigeria is blessed with a large size of land calculated to about 910 770 square kilometers with large size of it suitable for agriculture of about 708000sq. km amounting to 76,200,000 hectares as of 2016 World Bank Report<sup>199</sup> to produce crops in large quantity which can take care of her citizenry and supply for exportation. Currently, according to agricultural report in



the Annual Statistical Data of National Bureau of Statistics, all crops produced by farmers such as cocoa, yam, groundnut, maize sorghum, rice and beans are *ḥalāl*. In the livestock section of the sector, only pig is the *ḥarām* animal reared or produced in Nigeria. Fishing and fishery is another feasible source for *ḥalāl* supply because of many riverine settlements where fishing is practised intensely and where fishery can be encouraged and practised.<sup>200</sup> The climate in Nigeria is agriculture friendly for crops, livestock and fishing. Nigeria has strong and able-workforce which can be directed to the production of primary food- unprocessed crops, meat and fishes. In the world population ranking, Nigeria is placed seventh in the world population ranking with her population size of about 200 963 599 million people (Worldmeters).<sup>201</sup> This huge population is a strong booster in agricultural production. However, according to National Bureau of Statistics, in Nigeria, four in every ten people in the workforce are either unemployed or underemployed. The statistics recorded 111.1 people of Nigeria citizens as economically active working population. Looking at the Muslim population in Nigeria, in the world Muslim population ranking, Nigeria is placed eighth among the first fifteen largest Muslim population of the world. With this, Nigeria has a sustainable comparative advantage in *ḥalāl* food patronage over many countries of the world. Regrettably, in the Table showing the highest purchasing power in *ḥalāl* food market, Nigeria is not traceable in the list.

These Tables show the list of high potential markets for *ḥalāl* food and the countries with the highest purchasing power.

#### **2.2.16.7 Nigeria within the context of international *ḥalāl* market and certification**

Currently, Nigeria is not yet an international *ḥalāl* food certification country. The certification organisations in Nigeria operate at local and denominational levels. However, many countries which are not Muslim dominating countries have established, registered and certified *ḥalāl* certification agencies and organisations approved by their governments and have become significant contributors to the world *ḥalāl* trade such countries include U.K, U.S.A, China, Japan, UAE, Brazil, Australia, England, Turkey, Thailand and Malaysia. According to Thomas Reuters (2015), eight countries were identified with great interests and projections on *ḥalāl* food market and exportation with the status of *ḥalāl* food operation in the countries. U.K imported *ḥalāl* food estimated to be GDP 18 billion per annum spending it on importation of *ḥalāl* food.<sup>202</sup> USA spends USD18 billion on *ḥalāl* food purchase annually representing its

contribution to *ḥalāl* global market. Brazil which is a non-Muslim country is one of the leading exporters of *ḥalāl* food to global *ḥalāl* food market and targeting to become the second *ḥalāl* exporters in the world. Australia is ranked the world's top meat producer and exporter in global *ḥalāl* market since 1980's. Argentina, Brazil, New Zealand and United State of America are next to Australia in this order. Thailand operates 8000 *ḥalāl* food companies and experiences 20% growth annually.<sup>203</sup> In the case of Malaysia it takes the first position in the exportation of *ḥalāl* food ingredients. United Arabs Emirate with small population emerges as one of the strongest *Sharī'ah* compliant and aims towards becoming the world's *Sharī'ah* compliant.<sup>204</sup>

#### **2.2.16.8 *Ḥalāl* certifying agencies and organisations in South West, Nigeria**

There are currently 44 countries with internationally certified *ḥalāl* regulatory organisations. Nigeria is not yet among these organisations. *Ḥalāl* certification and *ḥalāl* food awareness is just recently gaining ground in the South West, Nigeria. However, guidelines for food processing which covers some *ḥalāl* food regulations are contained within the provision of Act Cap F33, 2014 of the Rules and Regulations of National Agency for Food and Drug Administration Control (NAFDAC). The section reads thus:

All forms of food processing which include animal processing, carried out in Nigeria, imported or exported must be duly inspected to be safe and certified by NAFDAC.

Qualified personnel with adequate experience and education must carry out the food processing.

The plant and facility where the processing is to be carried out should be adequately constructed to allow easy operation as applicable to the type of processing and must be spacious for orderliness as well as easy cleaning and maintenance.

Separate section should be provided for the food products that require unique storage condition which include cold rooms for frozen foods.

The processing section must make up of materials that can be cleaned and disinfected easily in order to ensure that the processed food remains safe for consumption.

The processing equipment should be such that is designed and maintained to reduce or eliminate the risk of contamination as a result of food particle build up or dirt that can contaminate the product.

The packaging material to be used as well as raw materials to be used in the food processing must be obtained from certified vendors and should be required qualified to avoid product contamination.

The distribution and transportation of the products should be carried out in such a manner that prevents the deterioration of the product quality. Also, contamination risks and spoilage should be minimised in order to ensure that costumers still get quality products at delivery destination.

All required measures and techniques in terms of adequate hygiene should be applied to ensure that all forms of contamination risks are avoided.<sup>205</sup>

Yet, the provision does not expressly define the guidelines as *ḥalāl* guidelines. Also, it does not exclusively define *ḥalāl* food processing as a prominent concern of the agency. It is also observed that Nigeria *ḥalāl* logos are included in *ḥalāl* logo list of the world without effects.<sup>206</sup>

In the South West, Nigeria, some non-governmental Islāmic organisations have embarked on issuance and advocacy of *ḥalāl* food certificate to food industries to ensure that the food companies and industries produce foods in line with Islāmic dietary law and for Muslims to be aware that taking food other than which is *ḥalāl* is against their religious practice and detrimental to their spiritual well-being. In recent years, the Federal Government of Nigeria under the auspices of the Federal Ministry of Health has signed a Memorandum of Understanding with an international *ḥalāl* certification body, *Ḥalāl* Research Council, a Pakistan-based *ḥalāl* certification body, to establish a *ḥalāl* certification agency in Nigeria that will be globally recognised.<sup>207</sup> Hitherto, this has not taken any effect. The agencies and organisations that are presently in operation in the South West, Nigeria include Muslim Ummah of South West Nigeria (MUSWEN), *Ḥalāl* Certification Authority (HCA), Nigeria Supreme Council for Islāmic Affairs (NSCIA), *Ḥalāl* Compliance and Food Safety Limited (HaCFoS) and *Ḥalāl* Standards Development Trust (HASDAT).

#### **2.2.16.8.1 Nigeria Supreme Council for Islāmic Affairs (NSCIA)**

Nigeria Supreme Council for Islāmic Affairs (NSCIA) is the umbrella body for the entire Muslims in Nigeria with its headquarters in Abuja. It is headed by a President-General permanently reserved for the office of Sultan of Sokoto. It was formally inaugurated in 1974. The first President-General was Sultan of Sokoto Late Sultan

Abubakr Siddiq II while the first Secretary-General was Late Dr (Alhaji) Lateef Adegbite of Ogun State origin. The primary and immediate cause of the formation of the council was to create an Islāmic body which will speak in one voice. This happened when Nigeria Islāmic organisations had divided interest in one international Islāmic conference held in Libya in 1973 while every other country which participated in the conference had a common presentation. The aims and objectives of the body include promotion of the continued application of *Sharī'ah* in Nigeria. With this objective MUSWEN takes *ḥalāl* certification as one of its responsibilities in Nigeria.<sup>208</sup> On *ḥalāl* food certification, the body certified about three food industries in Lagos and Ogun States before the demise of the first Secretary General of the body. These include May and Baker Industry and Obasanjo Farms Limited. It has now granted MUSWEN and HASDAT the authority to audit and certify food companies and authorised them to issue *ḥalāl* certificates to companies that meet up with *ḥalāl* certification requirements.

#### **2.2.16.8.2 Muslim Ummah of South West, Nigeria (MUSWEN)**

MUSWEN is the umbrella body for all the Muslim organisations and institutions in South West, Nigeria. The headquarters of the body is situated at Iwo Road, Ibadan, Oyo State. The initiatives of founding the body started in 2004. The body was eventually inaugurated in August 2008. The aim of the organisation was for the Muslims to be under one strong umbrella to enable them speak in one voice on any issue. So, the body serves as the mouthpiece for the Muslims in the South West, Nigeria. The body audited and certified Sayed Farms *ḥalāl* compliant. The certification was requested by the company. Thus, this request made MUSWEN to regard *ḥalāl* certification as a cardinal responsibility it must discharge. It, thus, constituted an adhoc *ḥalāl* certification team. The team consisted of experts in food technology, Islāmic Studies and other relevant areas on food safety and food production. Sayed Farms was, thus, the first firm that was certified as *ḥalāl*-based operating industry in Ibadan by the body. The body has been authorised by NSCIA to issue *ḥalāl* certificate in the South West, Nigeria.<sup>209</sup> MUSWEN has certified up to three food companies from inception up to the time this research was carried out.

#### **2.2.16.8.3 *Ḥalāl* Certification Authority (HCA)**

*Ḥalāl* Certification Authority (HCA) is a programme of The Muslim Congress (TMC). It is the food examination body of the TMC. The body consists of trustworthy pharmacists, engineers and food production experts. The headquarters of the body is situated at No.1, Thanni Olodo Street, Off Moshood Abiola Way, Jibowu Bus Stop, Yaba, Lagos. The experts examine the production processes of market products in order to make sure that they were processed under strict compliance with *ḥalāl* food guidelines and pronounce it, therefore, fit or unfit for Muslim consumption.<sup>210</sup> HCA has successfully audited and certified some food companies in Lagos.

#### **2.2.16.8.4 *Ḥalāl* Compliance and Food Safety Limited (HaCFoS)**

It is a non-governmental organisation emerged from Malaysia. Its headquarters is located in Lagos, Lagos State, Nigeria. Its main missions include creating awareness of *ḥalāl* food in Nigeria and certifying food and nutritional food products as *ḥalāl*. It has five trained *ḥalāl* food auditors. HaCFoS has not certified any food company as *ḥalāl* as at the time this study was carried out.<sup>211</sup>

#### **2.2.16.8.5 *Ḥalāl* Standards Development Trust (HASDAT)**

*Ḥalāl* Standards Development Trust is an independent, voluntary, non-profit making organisation in the supervision, inspection, auditing, certification and compliance of *ḥalāl* principles and practices in the Nigeria food and beverages industries. It operates under the supervision of the Board of Trustees (BoT) which is made up of members who are committed Muslims and with wealth of experience in their various endeavours. HASDAT is an approved organisation by the Nigeria Supreme Council for Islāmic affairs. It is established to certify *ḥalāl* food and other related products and to encourage the use and consumption of *ḥalāl* products. Its office is situated at 6, Adebo Close, Off Wilmer Crescent, Town Planning Way, Ilupeju, Lagos.<sup>212</sup>

### **2.2.17 Some selected abattoirs in South West, Nigeria**

#### **2.2.17.1 Lafenwa Abattoir in Ogun State**

Lafenwa abattoir is situated at Lafenwa an area in Abeokuta metropolis of Ogun state. It takes its name from its location. It was established some 60 years ago. It is the first abattoir in the state. Thus, Lafenwa abattoir is the mother abattoir in the state. It serves as the coordinating centre and controls the rest abattoirs in the state. There are seven

abattoir units within the premises. However, only one slab and lairage serve all the seven units. Animals are skinned, split and eviscerated after slaughter in the slab. Health officers are assigned to supervise and monitor the slaughter processing with an office built by the side of the slab. Two Muslim slaughterers are employed to slaughter and paid on the basis of the number of cattle slaughtered on daily basis. Majority of the butchers are Muslims.<sup>213</sup> Apart from slaughtering the cattle by Muslim scholars (*alfas*) who invoke *basmalah* as they slaughter, no other *Sharī'ah* guidelines are observed in the abattoir operation. The animals were skinned immediately the *alfas* slaughters the animal while blood is still gushing out from the arteries and the animal still convulses from death pain. Animals are killed in the presence of other animals that are on queue for slaughter. Animals are dragged forcefully to the slab.<sup>214</sup>

#### **2.2.17.2 Ibadan Central abattoir in Oyo state**

Ibadan Central Abattoir is a catalyst in integrating agro-allied industry development in the state. It is public-private partnership (PPP) that is geared towards ensuring that the public is supplied with healthy and hygienic beef. Mr Abiodun Kehinde, the developer of the Abattoir disclosed that the abattoir initiative started during the former Governor Adebayo Alao Akala led-administration in the state. Facilities in the abattoir include two manual slaughter slabs capable of 3000 cattle per day, an automated processor handling 50 cattle per hour, a 7000-capacity cattle holding bag, 700,000 litre capacity water tanks, incinerators to burn solids waste, human and animal clinics, a police post, a banking hall, restaurants, open and close stalls and retail selling sheds. The blood of cattle is processed in the abattoir for fish feeds, about 500 cattle are slaughtered daily at the abattoir, and a cow has about 16 litres of blood (flowing). The abattoir commenced work on June 4, 2018.<sup>215</sup>

However, as large as the Ibadan Central Abattoir, it is not a mechanised abattoir and not *Sharī'ah*-compliant oriented. What most of the abattoir workers consider as the *ḥalāl*ness of cow meat is by slaughtering it at the neck and blood gushes out. Even some of the abattoir workers are ignorant of a Muslim slaughterer and invocation of the name of Allāh as primary requisites of the *ḥalāl*ness of the beef. Post slaughter processes follow immediately after slaughter while blood is still gushing out from the arteries. Animals are killed in the presence of other animals that are on death roll. Animals are dragged forcefully to the slab.

### **2.2.17.3 Agege abattoir in Lagos State**

Lagos abattoir is ranked as one of the largest abattoirs in West Africa. It is situated on the Oko-Oba Agege axis of the state. At the abattoir, cows are let loose. Cows in procession do injure the passers-by and break vehicles. Waste passage is not maintained thus, blood flows to cover the place. Cows are slaughtered in open places. The processes of slaughtering, skinning and splitting of the cows are viewed by passers-by and people who live in the environment. Animals are stressed to the slabs. Some cows die on daily basis because of over-stress. The dead animals are sold to the butchers cheaply and processed at the slab and sold to consumers and retailers at a cheaper prices. Most food vendors around the abattoir hardly purchase the life cows. The breeders always beg the vendors to buy the dead or stressed cows. Majority of the animals were not inspected while some of these cows were sick and/or harboured infections like tuberculosis, lung and kidney diseases. The slaughtering slabs are always dirty before or after slaughtering. In Lagos abattoir, cows are mostly burnt with tyres. This is injurious to human health. The use of tyre produces hydrocarbon which is dangerous to human health.<sup>216</sup> The findings at the abattoir make it crystal clear that Agege abattoir does not operate on any account under the compliance of *ḥalāl* dietary guidelines. Apart from ensuring that the animals are slaughtered at the neck, no *ḥalāl* ethics are observed at the abattoir.

### **2.2.18 Certificated *ḥalāl* food industries in South West, Nigeria**

In South West Nigeria, a number of food industries have been *ḥalāl* certified locally. There is a second category that use *ḥalāl* certification logo but are probably certified by foreign certification bodies. Each of the two categories is discussed in this segment of the study.

The under-listed food industries were *ḥalāl* certified by local *ḥalāl* certification bodies in South West Nigeria:

#### **Sayed Farms Nigeria Ltd**

Sayed Farms is situated at 8 Jericho Road, Ibadan, Oyo State. It is into extensive farming and focuses mainly on poultry and livestock. The Farm was audited and certified by Muslim Ummah of South West, Nigeria as *ḥalāl* food producer in 2013. However, no periodic supervision has been carried out at the industry after the certification by the MUSWEN to monitor the extent of the industry's compliance to

*ḥalāl* guidelines up to the time of this research work. Likewise the certification is not subject to periodic renewal.<sup>217</sup>

### **Obasanjo Farms Nigeria Ltd**

Obasanjo Farms was established in 1979. It is situated at Km 5, Idiroko Road, Ota, Ogun State with many branches across the country. It is the pioneer in mechanisation of Agriculture in Nigeria. The farms engages in production of eggs, chicken of different ages, pig breeding, breeding of rabbits, cattle growing for meat and dairy products; and fish fattening among others. Obasanjo Farms occupies more than 30 thousand hectares of land with more than 5500 workers. Obasanjo Farms chicken product was audited and certified by Nigeria Supreme Council for Islāmic Affairs Ogun State Wing as *ḥalāl* food producer in 2008.<sup>218</sup> However, no periodic supervision has been carried out at the Farm after the certification by the NSCIA to monitor the extent of the industry compliance to *ḥalāl* guidelines up to the time of this research work. Likewise the certification is not subject to periodic renewal.

### **May & Baker Nigeria Limited**

May & Baker is a pharmaceutical company in Nigeria. It is situated at 35 Sapara Street, Industrial Estate, Ikeja, Lagos. It manufactures products like vaccines, antibiotics and sera. Its productions were audited and certified by Nigeria Supreme Council for Islāmic Affairs Ogun State Wing as *ḥalāl* food and nutritional food supplements manufacturer.<sup>219</sup> However, no periodic supervision has been carried out at the Farm after the certification by the NSCIA to monitor the extent of the industry compliance with *ḥalāl* guidelines up to the time of this research work. Likewise the certification is not subject to periodic renewal.

## **2.2.19 South West based food manufacturers with *ḥalāl* label**

### **Parle Foods Plc**

Parle Foods is an Indian based food products company. It was established in 1929. However, it started producing biscuits in 1937. It is the producer of the famous Parle-G biscuit.<sup>220</sup> The *ḥalāl* logo has no link with any local or foreign *ḥalāl* certification agency. The logo is just a mere inscription of *ḥalāl* written in both Arabic and English languages in a circle.



### **Yale Foods Plc**

Yale Foods Company primarily specialises in the production and manufacturing of biscuits and confections. It is located at Oluyole Estate, MKO Abiola Way, Oluyole, Ibadan. Yale food products include cream biscuit, cabin biscuit, waffer biscuit, cracker biscuit, coaster biscuit, digestive biscuit, spicy biscuit, milk chocolate, cookies and bread.<sup>221</sup> The *ḥalāl* logo has no link with any local or foreign *ḥalāl* certification agency. The logo is just a mere inscription of *ḥalāl* written in both Arabic and English languages in a circle.

### **Deli Foods Nig. Plc**

Deli Foods was incorporated in 1998 situated at Plot 14 Block B, Ilasamaja Industrial Scheme, Apapa-Oshodi Express Way, Isolo, Lagos. The company engages in the production and marketing of biscuits such as cream cracker, cabin, coaster, classic, digestive, eat 'n' clap, among others.<sup>222</sup> The *ḥalāl* logo does not portray any local or foreign *ḥalāl* certification agency. The logo is just a mere inscription of *ḥalāl* written in both Arabic and English languages in a circle.

### **Nestle Plc**

Nestle Nigeria Plc is a food and beverage company headquartered in Lagos. It is majorly owned by Nestle S. A. of Switzerland. It was founded in 1961 and conducted trading in Nigeria under the name Nestle Products Nigeria Ltd. It has its main factory in Agbara Industrial Estate, Ogun State. It recently established Nestle Flowergate Factory mainly for Maggi production in Kajola area along Abeokuta-Sagamu Express Road, Ogun State.<sup>223</sup> The *ḥalāl* logo does not portray any local or foreign *ḥalāl* certification agency. The logo is just a mere inscription of *ḥalāl* written in both Arabic and English languages in a circle.

### **Nestle Flowergate Factory**

Nestle Flowergate is a new maggi production facility in the Kajola village near Sagamu, Ogun State of Nigeria. The factory was officially inaugurated in February 2011. It is the food and beverages giant's 27<sup>th</sup> plant in Africa. It employs about 3000 people in Nigeria. The company possesses 36.3ha located along Sagamu-Abeokuta Expressway. However, 12ha of the land has just been used for building the facility now in use for the operation. The infrastructure at the Flowergate complex includes a

row material storage facility, processing and wrapping facility, a mixed tower, an industrial service building, cooling tower and chillers. A production line is entirely dedicated for maggi.

The company processes perishable agricultural raw materials produced locally to produce maggi food seasoning and other culinary products. Maggi products are added with micronutritional substances to help combat iodine, zinc, iron and vitamin A deficiencies. A total of 37 billions maggi bouillon cubes are sold yearly in the Central and West Africa. The plant at Sagamu Nestle factory is twice Agbara Nestle factory plant. Major brands of Nestle products are Nescafe, Milo, Maggi, bottle water, Nespresso and Kitkat.<sup>224</sup> The *ḥalāl* logo does not portray any local or foreign *ḥalāl* certification agency. The logo is just a mere inscription of *ḥalāl* written in both Arabic and English languages in a circle.

### **Unilever Nigeria Plc**

Unilever Plc is the Dutch-English Company established in 1923. It has its Nigeria base as Unilever Nigeria Plc which is located at 1 Billings Way, Oregun Industrial Estate, Ikeja Lagos. It engages in the production of food and food ingredients, and home and personal care products. Its products include Close-Up, Pepsodent toothpastes, Knorr and Royco cubes. It launched the production of Knorr in 2000.<sup>225</sup> The *ḥalāl* logo does not portray any local or foreign *ḥalāl* certification agency. The logo is just a mere inscription of *ḥalāl* written in both Arabic and English languages in a circle.

### **PZ Cussons Plc**

PZ Cussons Plc is a major British manufacturer of healthcare products and consumer goods. It dates as far back as 1800s. Its headquarters is based at in Manchester, United Kingdom. Its office in Nigeria is situated at 55/47 Town Planning Way, Ilupeju Industrial Estate, Lagos. Among the products it manufactures include Olympic and Nunu milks both powder and evaporated.<sup>226</sup> The *ḥalāl* logo does not portray any local or foreign *ḥalāl* certification agency. The logo is just a mere inscription of *ḥalāl* written in both Arabic and English languages in a circle.

### **Honeywell Flour Mills Plc**

Honeywell Flour Mills is one of the main sectors of Honeywell Group. It is the Food and Agro-Allied sector, a subsidiary of the mother company. It produces flour-based

consumer products and listed under the Nigeria Stock Exchange. It is situated at 2nd Gate Bye-Pass, Tin-Can Island, Apapa Lagos.<sup>227</sup> The *halāl* logo does not portray any local or foreign *halāl* certification agency. The logo is just a mere inscription of *halāl* written in both Arabic and English languages in a circle.

### **Dufil Prima Foods Plc**

Dufil was established in Nigeria for the past fifteen years. It was incorporated in 2001. However it commenced operation in 2003. It commenced the production of food seasoning in 2008 at Ota, Ogun State. It produces Power Oil, Minimie noodle among others.<sup>228</sup> The *halāl* logo does not portray any local or foreign *halāl* certification agency. The logo is just a mere inscription of *halāl* written in both Arabic and English languages in a circle.

## **2.2.20 Survey study of products with halal logos in the South West, Nigeria**

### **2.2.20.1 Dairy production**

Dairy products (milk products) are a type of food produced from or containing the milk of mammals, primarily from cattle, goats, sheep, water buffaloes, camels and human. Dairy products include food items like milk, yogurt, cheese, butter, whey, casein, custard, curd, and cottage cheese. A food industry for the processing of milk is called a dairy or dairy factory. Dairy farming is a class of agricultural or an animal husbandry, enterprise for long-term production of milk usually from dairy cows, goats, sheep and camels which may be either processed on-site or transported to a dairy factory for processing and eventual retail sale.

Milk is one of the recommended foods for Muslims because it is considered pure and palatable. In Qur'an Q16:66 Allah says:

“And lo! In the cattle there is a lesson for you. We give you to drink of that which is in their bellies, from between the refuse and the blood, pure milk palatable to the drinkers.”

Milk is also a complete food for the fact that it consists of all classes of food vis-à-vis vitamin, protein minerals. Thus, it provides the body a good nourishment.<sup>229</sup>

There is whole milk, low fat milk, skimmed, and flavoured milk. Cheese includes whey, whey concentrate, whey isolate and lactose. There are also cultured milk, sour

cream, and yogurt. It is required that enzymes as ingredients in milk products should be *ḥalāl* and *ḥalāl* processed. Anticasing agents, preservatives and cultures should be from *ḥalāl* sources.

### **Some dairy products**

Common dairy products in South West, Nigeria include Dano milk, Nunu milk, Peak milk, Three Crown milk, Hollandia milk, Real milk, Loya milk, Olympic milk, Coast milk, Popular milk, Miksi milk, Just milk, Marvel milk Complian milk and infant formula like NAN, Lactogen, Wheyte products such as SMA gold, Infant SMA pink, Pre-Nan for Premature babies and fan milk yogurt. *Ḥalāl* status of the products is shown in the Table below.

**Table 2.2: Checklist of *halāl* logos/inscriptions and *halāl* food certifiers of some dairy products**

<b>Product</b>	<b>Manufacturer's name</b>	<b>Halāl logo/inscription</b>	<b>Halāl food/logo certifier</b>
Nunu milk	PZ Cussons Plc	✓	X
Marvel milk	Premier Foods Ltd	X	X
Dano milk	Dano Milk Nig. Plc	X	X
Loya milk	Loya Milk Premium Plc	X	X
Peak milk	Friesland Campina WAMCO Nig Plc	X	X
Three crown milk	Friesland Campina WAMCO Nig Plc (West Africa Milk Company Nigeria Plc)	X	X
Fan milk yogurt	Fan Milk Plc	X	X
Coast milk	PZ Cussons Plc	✓	X
Peak milk Nigeria	West Africa Milk Company Nigeria Plc	X	X
Popular milk	Givanas Nig. Ltd	X	X
Olympic milk	PZ Cussons Plc	✓	X
Luna milk	Givanas Nig. Ltd	X	X
Hollandia evaporated milk	Chi Ltd	X	X
Complan milk	Oriental Food Industry Ltd, Km 4 Ibadan Lagos Express Rd.	X	X

Source: Market survey by the researcher. Dec 2018.

The Table above indicates that only three products out of the thirteen products sampled in the markets have *ḥalāl* inscription. However, none of the three with *ḥalāl* logo/inscription indicates any *ḥalāl* certifier which grants them *ḥalāl* certificate and/or logo.

#### **2.2.20.2 Cereal**

A cereal is any of the edible components of the grains. In their natural, unprocessed, whole grain form, cereals are a rich source of vitamins, minerals, carbohydrates, fats, oil and protein. They are generally grains family and by FAO refer to crops harvested for dry grains only.<sup>230</sup> These include wheat, rice, barley, maize, popcorn, rye, oats, millets, sorghum, buckwheat, quinoa, fonio, triticace, canary seed, mixed grain & cereals. Cereals are the typical sources of flours which are the basic materials for bakery products. All bagged cereal grains needed to be certified *ḥalāl* since it undergoes some processing in bagging it. Preservatives are used. Rice is bagged per boiled so it is required to be confirmed *ḥalāl* for Muslim consumption. Common cereal mills and powder products include Honeywell semolina and wheat, golden penny semovita and wheat, Dangote semovita.

**Doughnuts and other fried goods:** Doughnut is made from grain flour and can be rendered non-*ḥalāl* by non *ḥalāl* ingredients.

**Cakes, cookies and pastries:** The major ingredients of cakes, cookies and pastries are sugar, flour and oil. The minor ingredients used in producing these foods make them to be different from one another. Mono-diglycerides and gelatin are parts of the ingredients used making it necessary to supervise the production processes for *ḥalāl* compliance.<sup>231</sup>

**Bread:** Bread is primarily made of flour and water which are basically *ḥalāl* with several minor ingredients. The several minor ingredients such as pan grease and release agents used in the utensil may not be *ḥalāl* or the equipment gets contaminated in the process of the production. The oil and other ingredients used to produce bread are produced from different sources and manufacturers. Bread is one of the most consuming foods thus, bread production and processing need to be given *Sharī'ah* dietary concern to ensure its edibility for Muslim consumers.

**Breakfast cereals:** These products are mainly made of pure grain based ingredients however minor ingredients are used alongside such as sugar, salt, colourants and

flavoured in cereal products. Mono and dicyclerides are widely used which is non-*ḥalāl* for Muslim consumption.<sup>232</sup> So, there is a need to checkmate the production procedure of the products for ensuring that they are *ḥalāl* suitable.

It is depicted in Table 2.3, as appears in appendix G, that only three products out of the twelve grain and flour products that were sampled in the markets have *ḥalāl* inscription. However, none of the three with *ḥalāl* logo/inscription reflects any *ḥalāl* certification body which certified the companies as *ḥalāl* producers and issued them *ḥalāl* logo.

### **2.2.20.3 Bakery**

A bakery is an establishment or shop that produces and sells food items based on flour and baked ovens.<sup>233</sup> The product includes bread, buns, cakes, pastries, pies, cookies, brownies, muffins, etc. Common cereal products in the markets include Honeywell spaghetti, Golden penny spaghetti, Oba spaghetti, Eva spaghetti, Golden penny twist, Golden morn, Honeywell twist, Dangote pasta spaghetti, Honeywellnoodle, Golden penny noodle, Superpack noodle, Dangote noodle, Hungryman, noodle, Bellefull noodle, Oriental noodle, Mimi Indomie, Minimie Indomie, wheat cerelac and maize and Soya cerelac. Famous biscuit products in the region of focus include Beli which includes beli cracker and coastal biscuits, Yale which includes coconut, digestive, firber and digestive plus; Mabisco which includes Tictactoc, Bisco biscuits; Parle which includes pesto and Allmilk; Oxford which includes coastal, oxford groundnut, master chef and Sonia products include malty biscuit.

Only 5 of the cookies and noodles sampled possessed *ḥalāl* inscription while 10 did not possess *ḥalāl* inscription as displayed in Table 2.4. This indicates that majority of the cookies and noodles did not *ḥalāl* inscription. Table 2.5 reveals that none of the eight breads sampled in the markets has *ḥalāl* inscription. And do not indicate any *ḥalāl* certifier. This implies that no baker produces in cognizance of *ḥalāl* certification guidelines. Only Rite and Bigi gala possess *ḥalāl* inscriptions as shown in Table 2.6 as appears in the appendix. However, the manufacturer does not indicate any *ḥalāl* certifier which grants the company *ḥalāl* certificate and/or logo. It can be submitted that majority of the gala products are not produced under *Sharī‘ah* dietary regulations.

#### 2.2.20.4 Confectionery

Confectionery is the act of making confections which are food items that are rich in sugar. There are sugar and flour (baker) confections. Sugar confections include candies (sweet in British English) such as candid nuts, chocolates, chewing gum, bubble gum, pastilage. Candy (US & Canada), Sweet (UK, Ireland) and lollies (Australia and Newland) are common words for most common varieties of sugar confectionery. Some confectioneries are sugar-free such as sugar-free peppermints. Baker/flour confections include cookies (e.g biscuits), noodles (e.g indomie, spaghetti), pastries, cakes, doughnuts, and other baked foods. Some available sugar confections in the markets include Al kamal wilki lollypop, sour powder candy, Americano café, ALZ chocolate, creamy yogurt, minitol, Rio pop, Rose lollypop, Reamy yogurt pop, orange fruity (trebbor), rol-a-cola, choco aramel lollypop, milkits lollypop, choco stick lollypop, big teddyB, and coco milk lollypop.<sup>234</sup> Chewing gum based or chewing gum are produced with any of the Generally Recognised As Safe (GRAS) ingredients by the USFDA. Stearates and gelatin are commonly used and their *ḥalālness* is very doubtful.<sup>235</sup>

The results in Table 2.7 show that only two of the ten products sampled in the markets have *ḥalāl* inscription. However, none of the two with *ḥalāl* logo/inscription indicates any *ḥalāl* certifier which grants them *ḥalāl* certificate and/or logo. This suggests that majority of the confections are not produced under Islāmic dietary law.

Confections are usually high in calories. Excessive consumption of confectionery has been associated with increased incidences of type 2 diabetes, obesity and tooth decay. Yellow colorants result in asthmatic reactions.<sup>236</sup>

#### 2.2.20.5 Fruits

Despite that fruits are naturally *ḥalāl*, fruits are now being preserved and cartoned to extend its period of edibility (shelf life) and for importation or exportation. Therefore, preservatives are used and thus needs to be supervised to ensure that *ḥalāl* preservatives are used to make it suitable for Muslim consumption. Some commonly preserved fruits in the markets include apple, water melon, cucumber, golden melon, grapes, and oranges.<sup>237</sup>



None of the three fruits sampled carries *halāl* logo/inscription and does not indicate any *halāl* certifier as depicted in Table 2.8. This can be interpreted that majority of the fruits in the markets are not preserved in accordance with *Sharī'ah* food guidelines.

#### **2.2.20.6 Drinks (beverages)**

A drink (beverage) is a liquid intended for human consumption to satisfy thirst and supply nutrients to the body. They are classified broadly into alcoholic and non-alcoholic.<sup>238</sup> Beverages may be in form of stimulants and/or refreshers. Beverages/drinks (non-alcoholic) include plain drinking water, milk, coffee, tea, hot chocolate, juices and soft drinks.<sup>239</sup> Common beverages in the markets include Nescafe which also has categories such as Nescafe de café, Nescafé 3/1 breakfast, Nescafe blend, Nescafé crem, of different grammes; Milo beverages of various packages: tins, sachets and refilled of various grammes. Drinks naturally of *halāl* origins common in the markets include Fayrous, Coca Cola, Pepsi, 5 Alive, Maltina, Maltex, Hi Malt, Dubic Malt, La Casera, Lucozade energy, Lucozade Boost, Boom, Ice tea, Happy Hour, Exotic, Bigi cola, Big Cola, Origin zero, Nutri- C/Sway, Capri- Sun, Active, Lucozade boost,

Table 2.9 shows 17 beverages sampled in the markets. Only 2 of the beverages carry *halāl* logos. The certifiers of the logos are not traceable from the packets or wrappers of the products. This result suggests that most of the beverages are not produced under the recognition and observance of *Sharī'ah* dietary law.

Table 2.10 shows 13 Table waters sampled in the markets. None of the table waters carries *halāl* logo. This result suggests that most of the table waters are not produced under the observance of *Sharī'ah* dietary law.

#### **2.2.21 Food ingredients**

Food ingredients are substances that are added to a food to achieve an effect. They include food additives, seasonings and preservatives. Food ingredients are used to produce a wide variety of foods that are safe, appetizing, uniform, and tasty. They are usually used in small quantities. Food ingredients are used to maintain products quality and freshness. They are used to prevent spoilage and make food more appealing and

extend shelf-life and prevent food waste. They are used to aid the processing and preparation of food.<sup>240</sup> Food ingredients that are common in the markets include:

Maggi seasoning: It has various brands such as maggi chicken by 16, maggi standard by 2500 counting, maggi standard cube by 12, maggi Niger pot by 24, maggi crayfish, maggi mixpy ginger and garlic, maggi golden beef, and maggi mixpy classic, Rinda cube, Sonia cube, Gino cube, Tasty cube, Royco, Suppy cube, Ami cube, King cube, Mamadol cube, Knorr cube, Mr Chef and Naija pot cube. Fat products vis a vis Butter products like Blue band, golden county, Mamadol butter, King butter, Moi butter, Summerfield county butter, and Simas butter and oil products such as turkey oil, Okin oil, Power oil, and Wesson oil (imported)

Tomato paste includes vitali crayfish tomato paste, Tasty tom tomato paste, Gino mix tomato paste, Sonia tomato paste, De Rica tomato paste, and Heinz mix tomato paste.

Pepper seasoning includes SpiCity powder, Gum curry powder, tiger curry gold, global purepep, Euroma curry powder, Nom spice, Sunripe, Farrow's giant marrow's peas, and Green giant.

In Table 2.11, it is revealed that 8 condiments were sampled in the markets of which none of them carries *ḥalāl* logo or inscription. The result reveals that none of the producers or manufacturing companies is *ḥalāl*-certified. Thus, it can be concluded that most of the condiments are not prepared under Islāmic dietary law.

Table 2.12 displays the result of the market observation on the *ḥalāl* logo and certifiers' status of six powder peppers. Only 1 of the powder peppers carries *ḥalāl* logo or *ḥalāl* inscription. The result reveals that most of the manufacturers of the common condiments operates in the context of *ḥalāl* food regulations. Thus, it can be concluded that most of the condiments are not prepared under Islāmic dietary law.

### **2.2.22 Nutritional food supplements**

These are dietary and nutritional products that contain nutraceuticals, vitamins, minerals and other food/nutritional production used to enhance wellness and health of the consumers and to prevent diseases which may be in form of capsule, syrup or tablet.<sup>241</sup> Considering capsules, multi vitamin capsules and gelatin capsules, gelatin

capsule is prone to non-*halal* composition as gelatin is predominantly made of pork gelatin unless if such capsule is labeled *halal*-certified. Since nutritional food supplement can take tablet, syrup/liquid form, one is not obliged to take multivitamin capsule to avoid taking those of gelatin based products. Hence, multivitamin is not to heal a disease but only to improve health.<sup>242</sup>

### **Some nutritional food products**

#### **Toothpastes**

Toothpastes are pastes powder, liquid or other preparations intended to clean the teeth, prevent the formation of cavities. It is used to remove mouth debris and dental plaque as well as to whiten the teeth. Toothpaste contains fluoride and thus classified as drug. It is considered as Over-The-Counter drug (OTC).<sup>243</sup> Toothpaste is given a focus in this study because it is used in oral cavity and can as well be incidentally swallowed. Moreover, among the ingredients used for producing toothpastes include alcohol. Common toothpastes in the markets include Oral B, Close-up, Maclean, Olive, Pepsodent, Dabur Herbal, Milk teeth and Colgate. None of these listed products carries *halal* label.

In Table 4.13, it is shown that 8 toothpastes were sampled in the markets. None of the toothpastes carries *halāl* logo. This result indicates that most of the toothpastes are not produced in compliance with *Sharī'ah* dietary law.

Few numbers of food products in the markets were labeled with *halāl* logos or *halāl* inscriptions. Some food products of some local food companies carry *halāl* inscriptions meaning that they are *halāl* certified. However, there is no indication of the certifying organisations that issued those companies *halāl* certificates either by local or international *halāl* certification bodies. Also, some imported food products carried *halāl* labels without traceable *halāl* certifiers. Five non-profit making (non-governmental) *halāl* certification organisations were identified in South West, Nigeria as at the period of the study.

### **2.3 Theoretical review**

Four segments of respondents were involved in the quantitative segment of the research. These were Muslim consumers, primary food workers, processed food

workers and health workers. Thus, the variables of study vary from one set of the respondents to the other. However, perception of *halāl* food was the dependent variable while awareness, knowledge, attitude, subjective norms, perceived behaviour, religiosity, certification, logistics, behavioural intention, *halāl* slaughter and *halāl* terms were the independent variables used to achieve the objectives of the study. Based on the variables of the study, three theories and one conceptual framework were adopted. The theories are: Theory of Planned Behaviour (TPB) for studying general attitudes of Muslims towards consumption of *halāl* food, Convention Theory for safety and quality control of *halāl* food processing and production and Actor-Network Theory (ANT) for logistics; and the conceptual framework is Hazard Analysis Critical Control Points (HACCPs).

### **2.3.1 Theory of Planned Behaviour (TPB) by Icek Ajzen**

Who is Icek Ajzen?

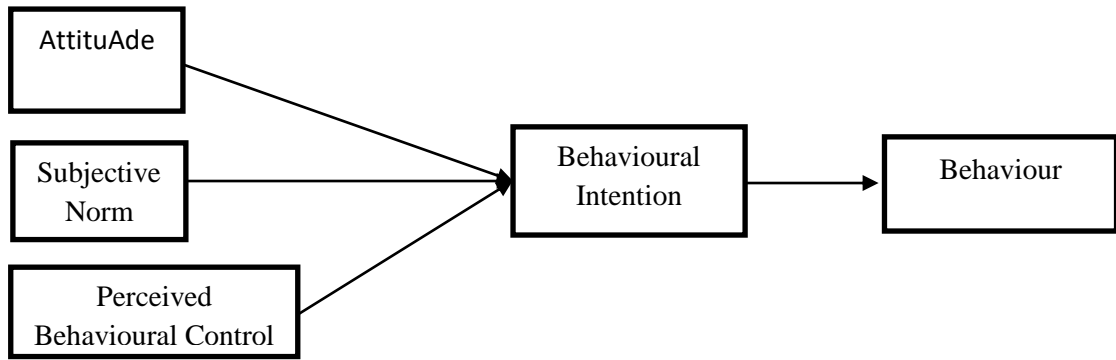
Icek Ajzen, born in 1942, is a social psychologist. His name is sometimes spelt as Aizen. He is a Professor of Psychology at University of Massachusetts. He obtained his Ph.D. in 1969 at the University of Illinois at Urbana, Champaign, in Psychology. He acquired Bachelor of Arts in Sociology in 1967 at Hebrew University of Jerusalem, Israel. He developed Theory of Planned Behaviour (TPB) in 1985 as an improved Theory of Reasoned Behaviour which he developed in 1980.<sup>18</sup>

Behaviour is predicted by three variables. These are individual attitude towards the behaviour, subjective norms and perceived behavioural control collectively; all the three lead to the formation of intention which finally affects the behaviour.”<sup>19</sup> Thus, Theory of Planned Behaviour links intention with behaviour. The Theory states that attitude towards behaviour, subjective norms and perceived behavioural control, together shape an individual’s behavioural intention and behaviours as proposed by Icek Ajzen in his article: “From intention to action.”<sup>20</sup> Since *halāl* food consumption as a phenomenon cannot be complete without studying the attitude particularly of Muslims, the Theory of Planned Behaviour is therefore significantly relevant. This theory was regarded as one of the most influential and popular theoretical framework for the study of human action or attitude. According to this framework, knowledge why Muslim would (or) choose to trust in *halāl* food, *halāl* food label (logo) and choose to buy and consume a product requires comprehending the concept of attitude, subjective norms and perceived behavioural control.

**Attitude:** Attitude is the tendency to respond positively or negatively towards a certain idea, object, person or situation thus, it influences and determines human behaviours.

**Subjective norms:** These are the extrinsic and exogenous social factors that can affect or influence a person's behaviour such as family members, friends, imams, organisations to which one belongs and co-workers.

**Perceived behaviour control:** This is the state of perception of a person which determines his final decision to respond to an issue or situation at a point in time. It is an intrinsic and endogenous factor. It explains the easiness or difficulty experienced by a person to consume or afford something which is, in this context, *ḥalāl* food. That is, it is in the belief of how easy or how difficult it is for a person to perform a behaviour. By extension, how easy or difficult it is for a person to consume or buy *ḥalāl* product which can be determined by economic status of such a person like the price, the availability, accessibility and the variety of *ḥalāl* food available to such consumer was studied. This influences the formation of a behavioural intention in performing an action. The framework of the theory is diagrammatically represented below.



**Fig. 1.1: Framework of Theory of Planned Behaviour [TPB] (adopted from Ajzen 1991)**  
**Source: Ajzen and Fishbein Martin: Knowledge, attitude and predicting social behaviour. Eaglewood Cliffs New Jersey, Prentice Hill 1991 p.179.**

### **2.3.2 Actor-Network Theory (ANT) by Michel Callon and Bruno Latour**

**Michel Callon:** Michel Callon born in 1945 is a Professor of Sociology at the Ecole des Mines de Paris. He is a member of Centre de Sociologie de l' Innovation. He is an influential author in the field of Science and Technology Studies and also one of the leading proponents of Actor-Network Theory with Bruno Latour.<sup>21</sup>

**Bruno Latour:** He was born in 1947. He is a French philosopher, anthropologist and sociologist. He is famously known for his work in the field of Science and Technology Studies (STS). He taught at the Ecole des Mines de Paris (Center de Sociologie de l' Innovation) from 1982 to 2006. He became a Professor at Science Po Paris in 2006-2017. He retired from several university activities in 2017.<sup>22</sup>

The theory is distinguished from other network theories in that an actor network contains not merely people but also objects and organisations. The A.N.T claims that any actor whether person, object (including computer software, hardware), technical standard or organisation is equally important to a societal order. There will be a breakdown of order when certain actors are removed. For example the removal of telephone or a cashier or the security officer from a bank during working hours would disorganise the system and affect the quality of the services that the bank renders.

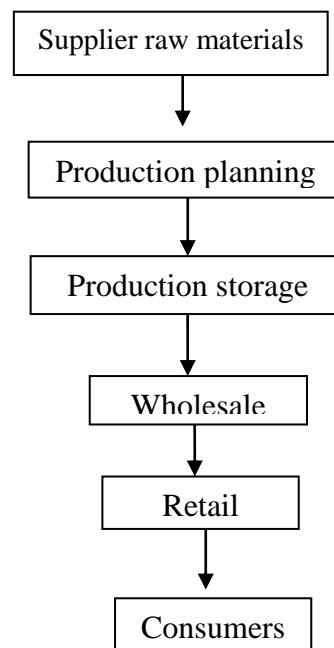
The Theory is a framework and systematic way to consider the infrastructure surrounding technological achievement. The Theory assigns agency to both human and non-human actions. The Theory incorporates what is known as “the principle of generalised symmetry.” That is, what is human and non-human (e.g artifact, organisation and structure) should be integrated into the conceptual framework and assigned equal amounts of agency.<sup>23</sup> This Theory analyses the chain of connectivity of actors in a food production network and negotiates whether and how certain product attributes and their production methods will be included in the product specification.<sup>24</sup>

### **2.3.3 Convention Theory**

Convention as appeared in the name of the Theory is defined as a set mechanism and rules of involving the content of product, specification roles of third parties, strategies of product differentiation and labeling. This is used for defining and recognising the

quality of products and for solving problem related to quality uncertainty (Vannopen et al 2004).<sup>25</sup>

The afore-mentioned theories are essentially relevant and appropriate in this research since *halāl* food incorporates not only the physical properties of the product but also the conditions under which it is produced, distributed and retailed taking care of external transportation, warehousing and storage. This is diagrammatically illustrated by Van Goor (1993) as below.



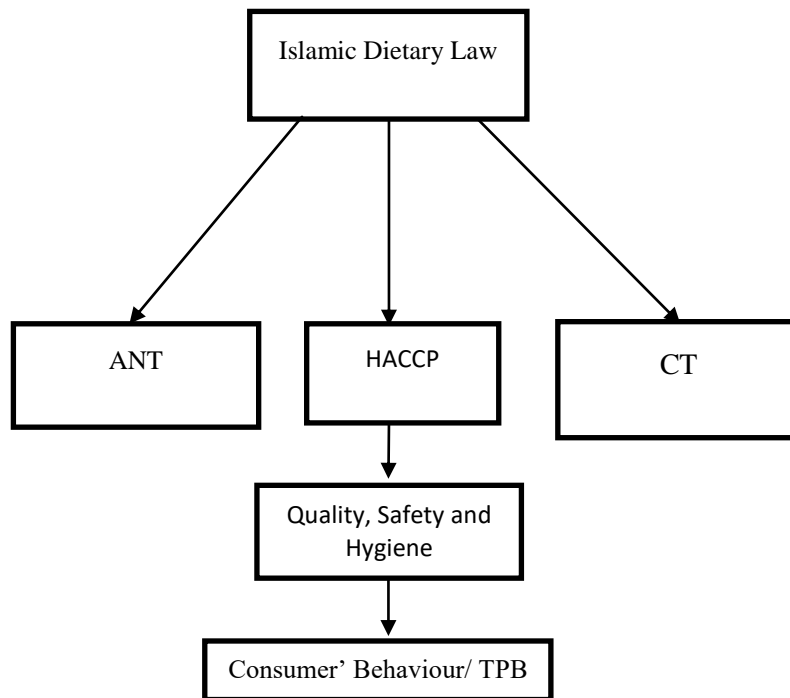
**Fig. 2.2: Technology supply of goods (Van Goor, 1993)**



#### **2.3.4 Hazard Analysis Critical Control Points (HACCPs)**

Hazard Analysis Critical Control Points is a framework designed for food safety rather than for food quality. However, it eventually results in food quality control. This was prompted by urgent need for safe food for space workers by United State of America. It was said to have been established by Pills Bury in the 1960s when USA National Aeronautics and Space Administration (NASA) requested him to create a safety framework under which the food that were supplied to the space workers would be produced and manufactured.<sup>26</sup> HACCPs focuses only on the health safety issues of a product and not the quality of the product, yet its principles are the basis of most food quality and safety assurance system. The framework is used to identify safety hazards in food industry. HACCPs is a systematic preventive approach to food and pharmaceutical safety which addresses physical, chemical and biological hazard as a means of prevention rather than finished product inspection with a critical limit. A critical limit is the maximum or minimum value to which a physical, biological, or chemical hazard must be controlled at a critical point to prevent, eliminate, or reduce hazard to an acceptable level.

This system is used at all stages of food production and preparation process including packaging to avoid and control the risk of cross-contamination that may occur at any logistical and/or procurement stages for enhancement and assurance of the food safety and quality till it gets to the final consumer.<sup>27</sup> In relation to Islāmic dietary law, the *maqāsid al-Sharī'ah* is to preserve the health of the consumers and purify their souls, therefore, this framework is appropriate for the study. The connectivity of the theories and framework on logistics used in this study is schematically illustrated below.



**Fig. 2. 3 Framework of Hazard Analysis Critical Control Points**

#### **2.3.4.1 Meat and poultry products**

Chaudry (2004) identified different *ḥalāl* critical control points for different meat and *ḥalāl* food processing.<sup>168</sup> Meat refers to skeletal muscle, fat and other tissues of an animal killed for food. It may also be defined as the edible tissues of an animal. It is sometimes used to mean the flesh of mammalian species such as cattle, camels, goats, lambs, bush animals other than insects, poultry, fish and seafood killed or slaughtered for human consumption. It also refers to animal flesh eaten as food whether domesticated or hunted. Meat industries include animal farm/husbandry and slaughterhouse (abattoir).<sup>169</sup>

#### **2.3.4.2 *Ḥalāl* production requirements for meat and poultry**

Majority of dietary prohibitions placed on the Muslims by Allāh rest on land animals. Thus, certain conditions are recommended by the holy Prophet Muhammad (PBUH) for handling animals to be slaughtered. The Prophet was quoted to have said:

“Verily Allāh has prescribed proficiency in all things. Thus, if you kill, kill well, and if you perform *dhabiha*, perform it well. Let each one of you sharpen his blade and let him spare suffering to the animal his slays.”<sup>170</sup>

In traditional Islāmic slaughter, the throat of the animal is to be slit, cutting the carotid arteries, jugular veins, trachea and the esophagus, without severing the neck by a Muslim slaughterer. Imam Malik recommended that *al-hulqumah* (throat) and *al-wadjayn* (jugular veins and carotid arteries) be cut both together at once during slaughter. He stated that if the animal is slaughtered above the *halq* (throat) the meat of the animal becomes *ḥarām* for Muslim consumption. However, Shafi’ standpoint is that when *al-hulqumah* and *al-mari’* are cut both together at once during slaughter, it is *ḥalāl* slaughter without necessarily cutting the *wadjayn*. He stressed that *al-wadjayn* are just food and drinks passages. However, the name of Allāh must be invoked by the slaughterer while slaughtering the animals, sharp object or blade must be used and the animal must be severed at the neck or throat. The blood must gush out and drain. The animal should be healthy and free from diseases. The animal should be humanely handled. No part(s) of the animal should be cut prior to the actual slaughtering or after slaughtering until the animal is completely dead. By implication, the animal should not be skinned or de-haired, until when it is completely dead. The head should not be cut

off in the slaughtering process. The knife should not reach the neck bone. Dull object or knife should not be used. The knife should not be sharpened in the presence of the animal seeing the slaughterer sharpening the knife. One animal should not be killed in the presence of other animals in the death roll.<sup>171</sup> For mechanical and industrial slaughter, a Muslim operator must be assigned the assignment who must pronounce the name of Allāh as he operates the machine to slaughter the animals. In the case of poultry slaughter, Chaundry recommends that there should be a Muslim slaughterer at the end of the machine. He is to slaughter the missed chickens (by the machine) or to slaughter the birds that are half slaughtered by the machine.<sup>172</sup> Animals must be completely lifeless before any post slaying process is carried out. In mechanical slaughtering, if there is any break, the machine must be stopped and restarted sticking to the previous procedure.

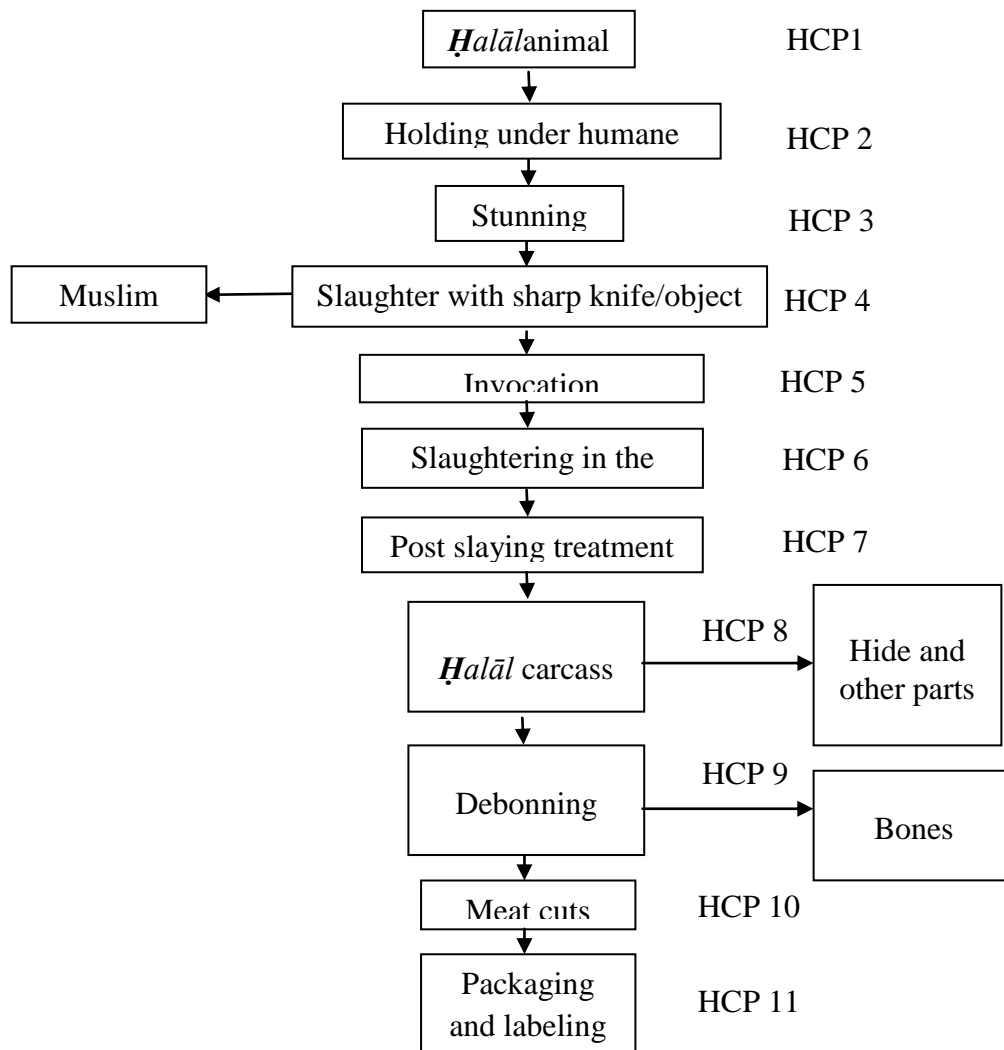
In poultries where *halal* and non-*halāl* birds are processed *halal* birds must be completely segregated during de-feathering, chilling, evisceration processing and storing. Containers with *halāl* product should be clearly stamped *halāl* with proper *halal* codes and markings by authorised *halal* inspector.<sup>173</sup> Further processing such as marinating, breading and application of batters or rubs should also be done under the supervision of a qualified *halāl* inspector by using thoroughly clean equipment. Non-meat ingredients used in the processing such as spices, seasoning, and breading must be *halāl* approved.<sup>174</sup> When freezing, *halāl* product must be received by a Muslim inspector and the product must be separately stored or frozen not mixing it with non-*halāl* products and must be accompanied with *halāl* certificate.<sup>175</sup>

#### **2.3.4.3 Recommendations for Industrial *halāl* production**

A product should not be labeled as *halāl* by any producer without a Muslim inspector who participates in the processing and certifies it as *halāl*. Label is not only enough to accept a product as *halāl* but must be certified by *halāl* agencies. Playing of recorded *basmalah* should not be used as substitute for invocation of *basmalah*. Humane slaughter should be observed and certified by a Muslim inspector. Where a company produces a non-*halāl* product, pork or pork derived product should not be simultaneously produced by such company. Pork or pork derived products should not be produced prior the processing of *halāl* products in a company that produces a non-*halāl* product.<sup>176</sup>

#### **2.3.4.4 *Ḥalāl* Hazard Analysis Critical Control Points (HCCPs) for meat and poultry products**

The control points framework used in this study are analysed and designed by Chaundry. Modifications are made in some cases. The frameworks are adopted for this study because they identify every sensitive stage of food processing where there could be food cross- contamination with non-ḥalāl food products and/or equipment. The framework are thus required to be strictly observed and supervised.<sup>177</sup>



**Fig 2.1 Halal Control Points for animal meat**

Source: Mian N. Riaz and Muhammad M. Chaudry. 2004. *Halal Food Production*. London. CRC press LLC.

**HCP 1: *Halāl* animal**

The first *halāl* control point in meat and poultry is the animal species. The animals must be acceptable *halāl* species. A non-*halāl* animal cannot be considered *halāl* even if it is slaughtered in Islāmic way. *Halāl* and non *halāl* animals are mentioned in chapter 4.

**HCP 2: Humane treatment**

Humane treatment of the animals to be slaughtered is a control point. The animal should not be stressed prior to slaughter, it should not be starved with thirst and should not be beaten to the slab.

**HCP 3: Stunning:**

It is preferable that animal should not be stunned as discussed in chapter four but if it must be stunned it should be ensured that it does not die by stunning before it is slaughtered or else, it renders the animal *maytah* (carrion), and thus, becomes *haram* for Muslim consumption.

**HCP 4: Sharp knife**

This must be religiously observed. The object or instrument to be used to slaughter should be very sharp to sever the animal at a slit.

**HCP 5**

Muslim slaughterer: The slaughterer must be a Muslim. A trained Muslim slaughterer would be more efficient. A non-Muslim slaughterer is not same as a Muslim slaughterer even if the non-Muslim slaughterer invokes '*al basmalah*'- *bismillahi wa Allāhu Akbar* to slaughter.

**HCP6: Invocation**

It is mandatory to pronounce the name of Allāh when slaughtering the animal. However, in mechanical slaughtering, a Muslim should be assigned to invoke *Bismillah wa Allāhu Akbar* continuously till the set of the animals are slaughtered. Recorded invoked *Bismillah wa Allāhu Akbar* is not encouraged for sanctifying the slaughtering.

**HCP 7: The cutting**

The throat should be severed without reaching the neck bones or cutting the whole neck of the animal off.

**HCP 8: Post slaying**

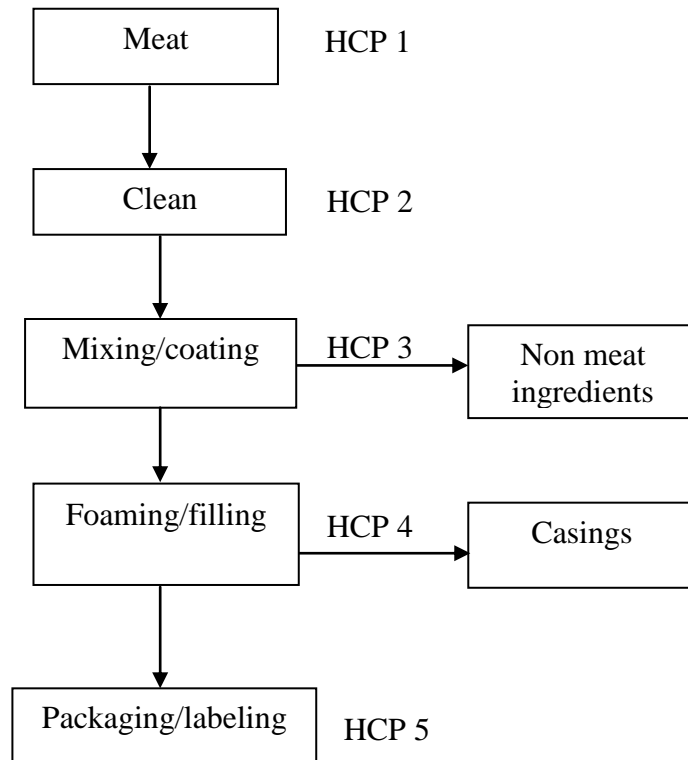
The animal must be completely dead before it is de-haired, skinned, split, or burnt.

Hot water should not be poured on the animal unless it is confirmed dead.

**HCP 9:** Packaging and labeling

The containers that would be used to pack the carcass of the animals must be clean and not contaminated with any *haram* substance and should be properly labeled.





**Fig. 2.2 Further processed meat/poultry items HCPs.**

Source: Mian N. Riaz and Muhammad M. Chaudry. 2004. *Halāl* Food Production. London. CRC press LLC.

**HCP1: Source**

The source of the meat must be identified and certified as *ḥalāl* source. This should be confirmed by a Muslim inspector.

**HCP 2: Equipment**

The instruments are required to be clean on *ḥalāl* basis under the supervision of a Muslim inspector. Equipment used for non-*ḥalāl* meat should be cleaned under the same condition. Equipment used for pork and pork products should be discouraged to be used in processing *ḥalāl* meat.

**HCP 3: Non-meat ingredient**

It should be ensured that prohibited ingredient is at zero level in *ḥalāl* products. Ingredient like gelatin, pork extract, lard, natural bacon flavor should be carefully avoided.

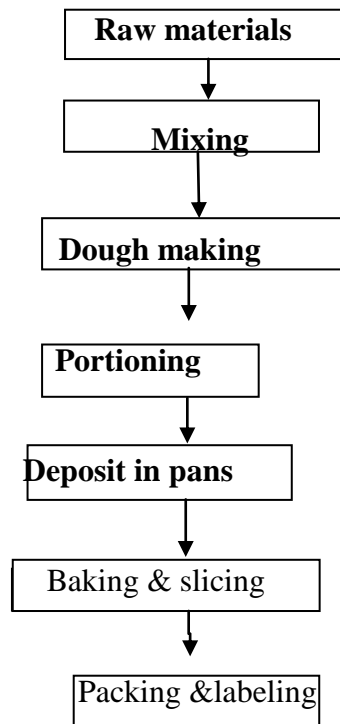
**HCP 4: Casing**

Only casings from *ḥalāl* sources should be used for *ḥalāl* products derived from *ḥalāl* animals that are slaughtered in *ḥalāl* way. If the casings are from *ḥalāl* animals but the animals are not slaughtered fulfilling *ḥalāl* guidelines, it should not be used for *ḥalāl* products.

**HCP 5: Packaging and labeling****2.3.4.5 Requirements for cereal**

Cereal based products include a large number of staple food products such as bread, breakfast cereal, cakes, doughnuts, cookies, pastries and chewing gum. Major ingredients used to produce these products are flour, sugar and shortening among many hundreds other ingredients that can be used. Chaundry identified some questionable ingredients used in the production of these products. Such ingredients are said to be non-ḥalal ingredients. These include gelatin, mono- and diglycerides, cream liquor, pan grease and release agent and cysteine since the sources of these ingredients are mostly from non-ḥalal.<sup>178</sup>

## Breadmaking *Halāl* Hazard Analysis Critical Control Points

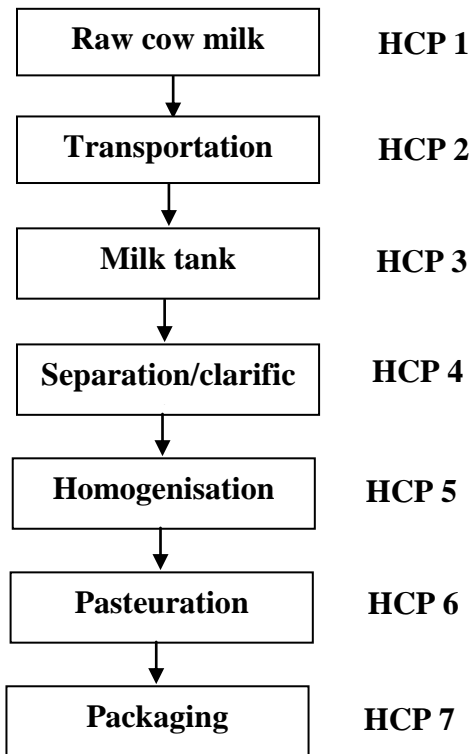


**Fig 2.3 Breadmaking *Halāl* Hazard Analysis Critical Control Points**

**Source:** Mian N. Riaz and Muhammad M. Chaudry. 2004. *Halāl* Food Production. London. CRC press LLC.

#### **2.3.4.5. *Ḥalāl* Hazard Control Points for milk**

Milk production starts from raw cow milk from the farm to packaging and/or labeling. The *ḥalāl* hazard analysis control points are thus rest on the major steps. The critical points are shown in the flow chart below.



**Fig. 2.4 *Halāl* Hazard Control Points for milk**  
Source: Designed by the researcher

HCP1: Raw milk: The milk must be from *ḥalāl* animal. However, milk is usually from cow's milk but sheep and goat's milk is sometimes used. Any other source of milk may be used as long as it is *ḥalāl*

HCP2: Transportation: The raw milk should be packed in container that is clean of *ḥarām* substances.

HCP 3: Milk tank: It must be ensured that the tank is not contaminated with any *ḥarām* and harmful substance.

HCP 4: Separation/clarification:

HCP 5: Homogenisation: This is the stage when the milk is branded. That is, the milk is produced to have a different taste, odour and colour, making it a unique product of a particular manufacturer. It should thus be ensured that non *ḥalāl* ingredient was added to it.

HCP 6: Pasteurisation: This is the stage of heating the milk. When heating, it should be ensured that non-ḥalāl enzymes, chemical and other *ḥarām* preservatives were avoided.

HCP 7: Packaging and labeling: It should be packed in clean suitable packing materials and labeled properly and identified with *ḥalāl* markings.

#### **2.3.4.6 Fish and seafood**

Seafood is any form of sea life regarded as food by human. It includes fish, mollusks, shellfish roe, crayfish, crabs, echinoderms, jelly fish, spoon worms, lancelets, ducks and frogs. It also includes aquatic plants and microphytes such as seaweed and microphytes. Seafood is a high protein food that is low in calories, total fat and saturated fat. It is high in vitamins and minerals. They are edible aquatic animals excluding mammals.<sup>179</sup>

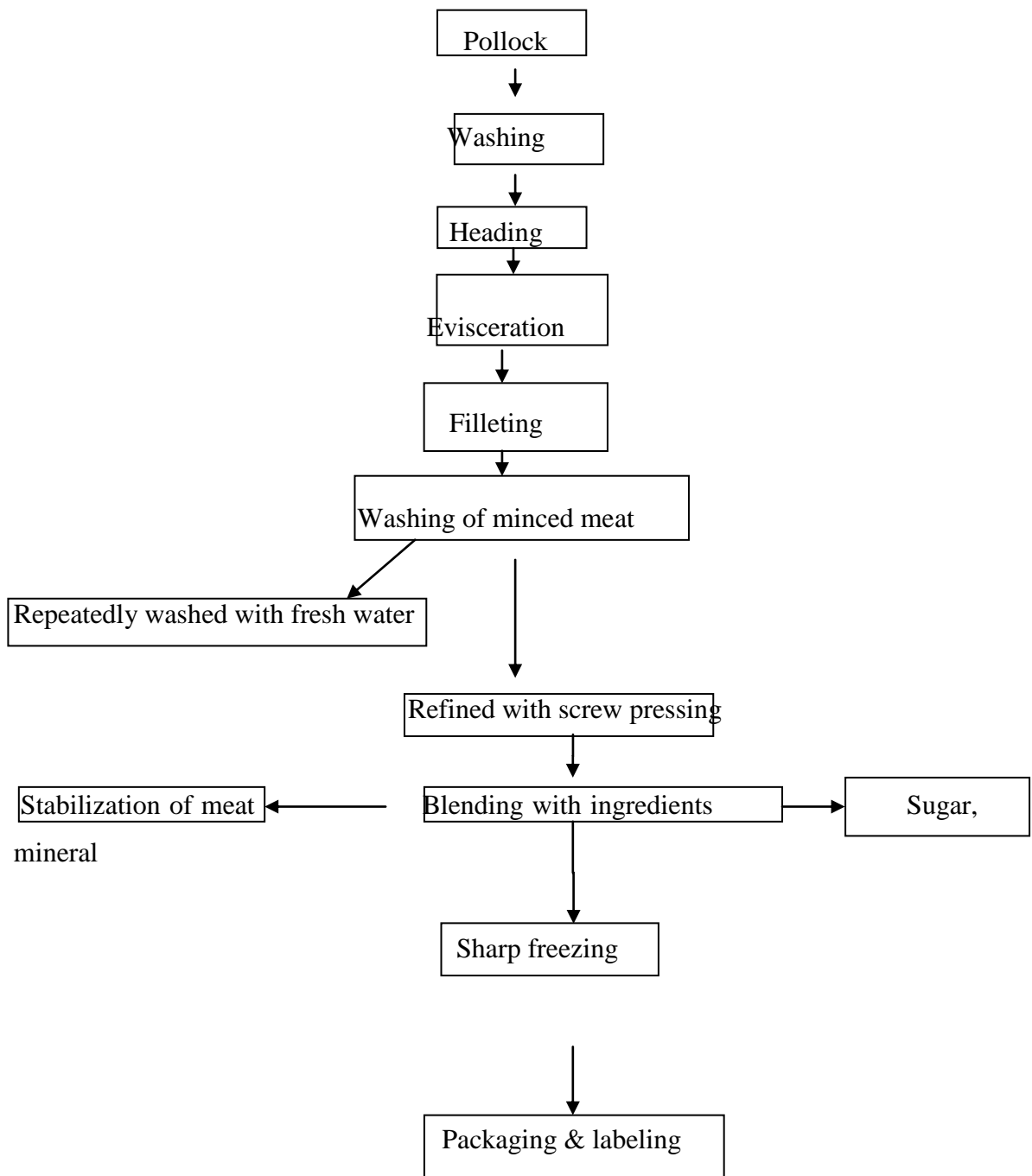
#### **General guidelines for processing fish and seafood**

Despite that no specific way is prescribed for killing or slaughtering fish and other seafood or sea animals some slaughtering guidelines should be observed. These include that;

- 1 the fish or animal should not be scaled alive. That is, the scales should not be removed when the animal is not completely dead,
- 2 we should ensure that the animal is humanely killed,

- 3 the animals should not be cut into parts until the animal is completely dead. No prohibited ingredients during the processing should be used,
- 4 contaminated equipment such as knife and container should not be used
- 5 the fish should not be packed with non *ḥalāl* food.<sup>180</sup>

### Seafood *Halāl* Hazard Analysis Critical Control Points



**Fig. 2.5: Seafood *Halāl* Hazard Analysis Critical Control Points**

Source: Mian N. Riaz and Muhammad M. Chaudry. 2004. *Halāl* Food Production. London. CRC press LLC.



### ***Ḥalāl* Control Points in Surimi Production as a Seafood product**

**HCP 1:** Removal of all non targeted animals such as crab, shellfish or turtles.

**HCP 2:** Addition of stabilizers and cryoprotectants. All ingredients should be *ḥalāl*.

**HCP 3:** Packaging and labeling- It should be packed in clean suitable packing materials and labeled properly and identified with *ḥalāl* markings.

#### **HCP 1: Mixing**

Mixing is taken as HCP 1. It requires all the ingredients major and minor to be *ḥalāl* suitable.

**HCP2-** Release agents and pan grease if used should also be *ḥalāl* suitable.

#### **HCP 3: Packaging**

Materials used for packing *ḥalāl* bread must not contain any ingredients of animal origin such as animal stearate.

All these are theoretical literary contributions to *ḥalāl* food production necessitating field work to study the extent these HCPs are being practically observed being the focus of this research work.

2.3.4.7 *Halāl* food administration conceptual models

MODEL A

*HALĀL* FOOD AWARENESS/ADVOCACY MODEL

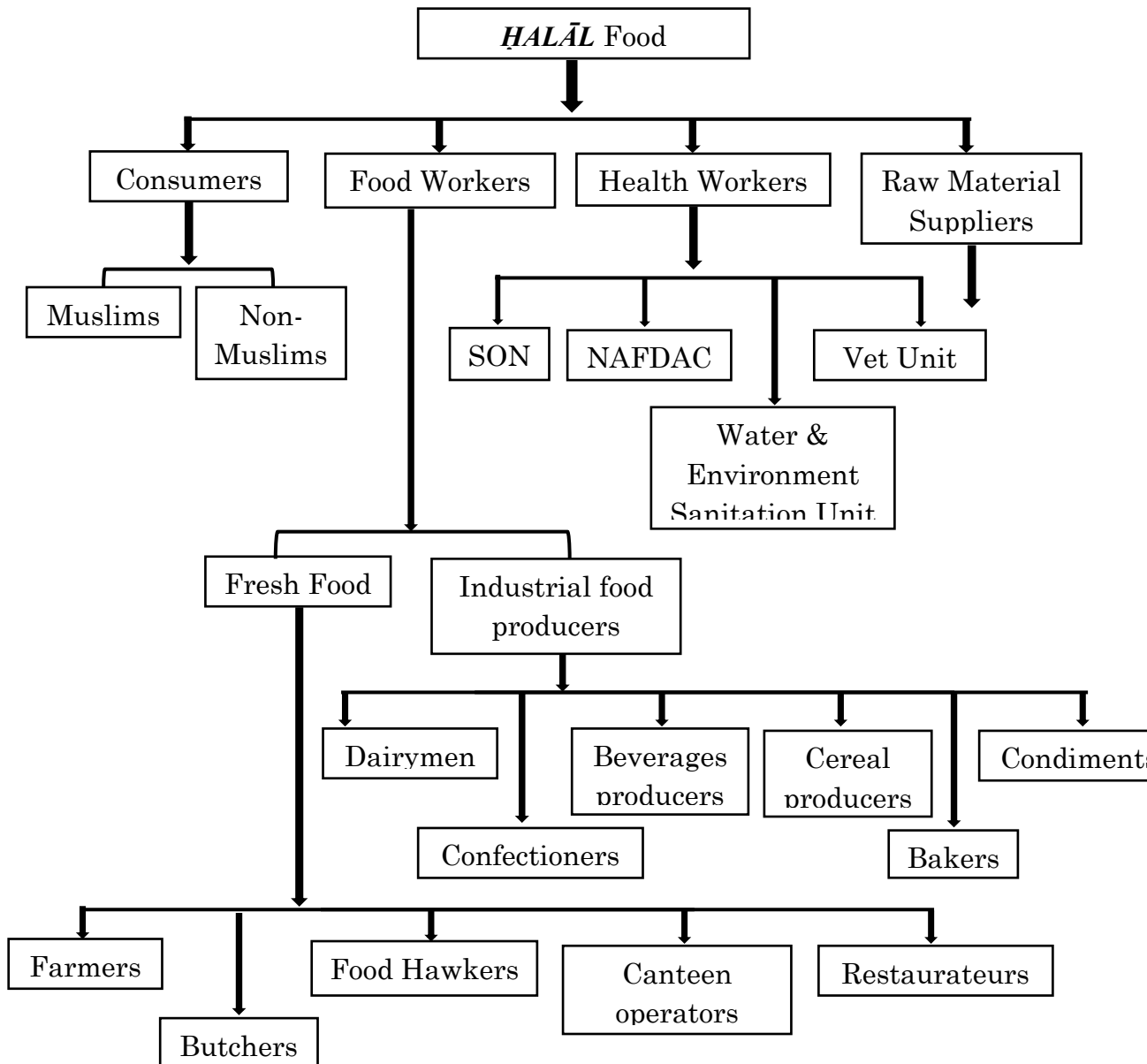


Fig. 2.8 *Halāl* food awareness/advocacy model

## MODEL B

### HALAL FOOD CERTIFICATION CONCEPTUAL MODEL

#### HALAL FOOD CERTIFICATION

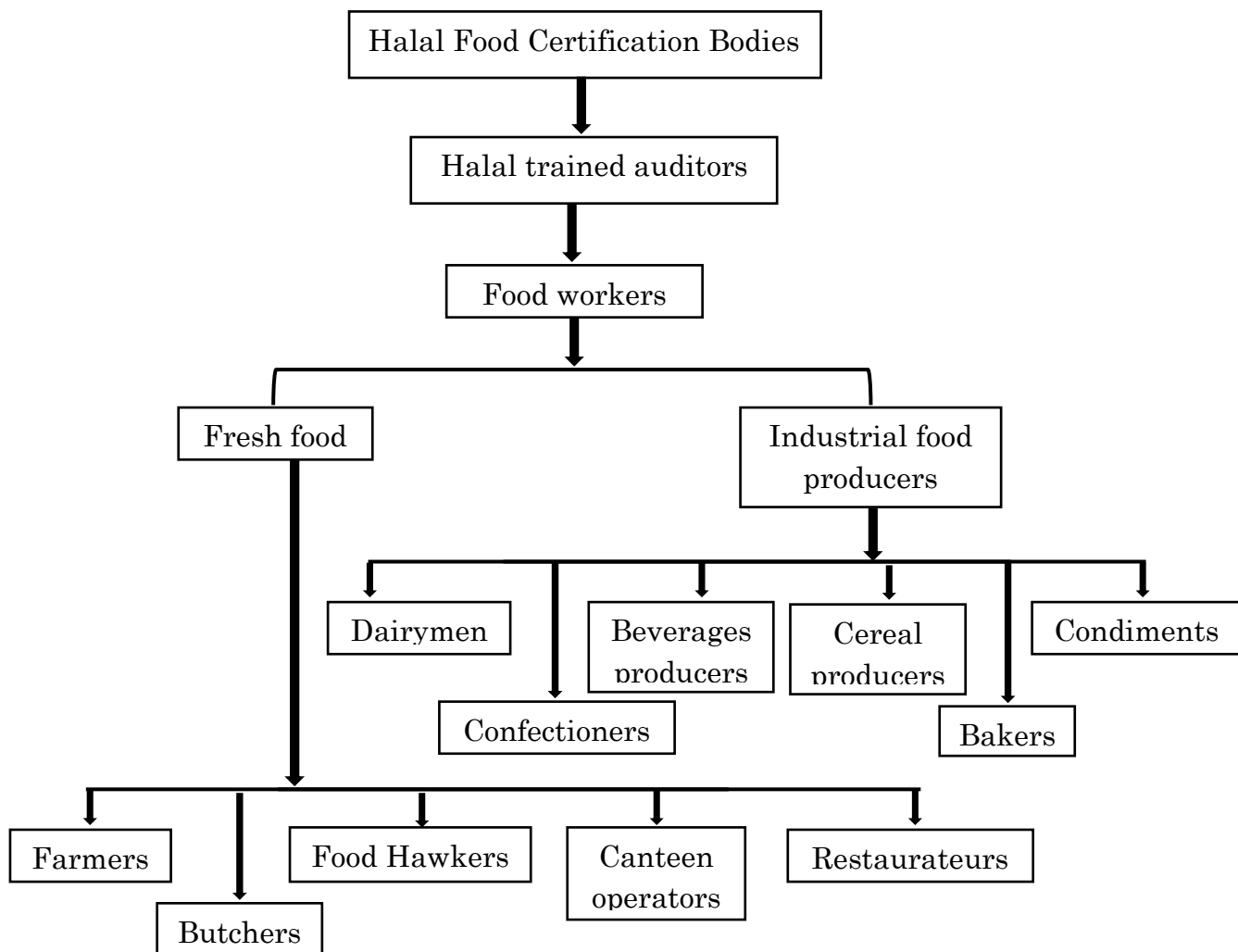
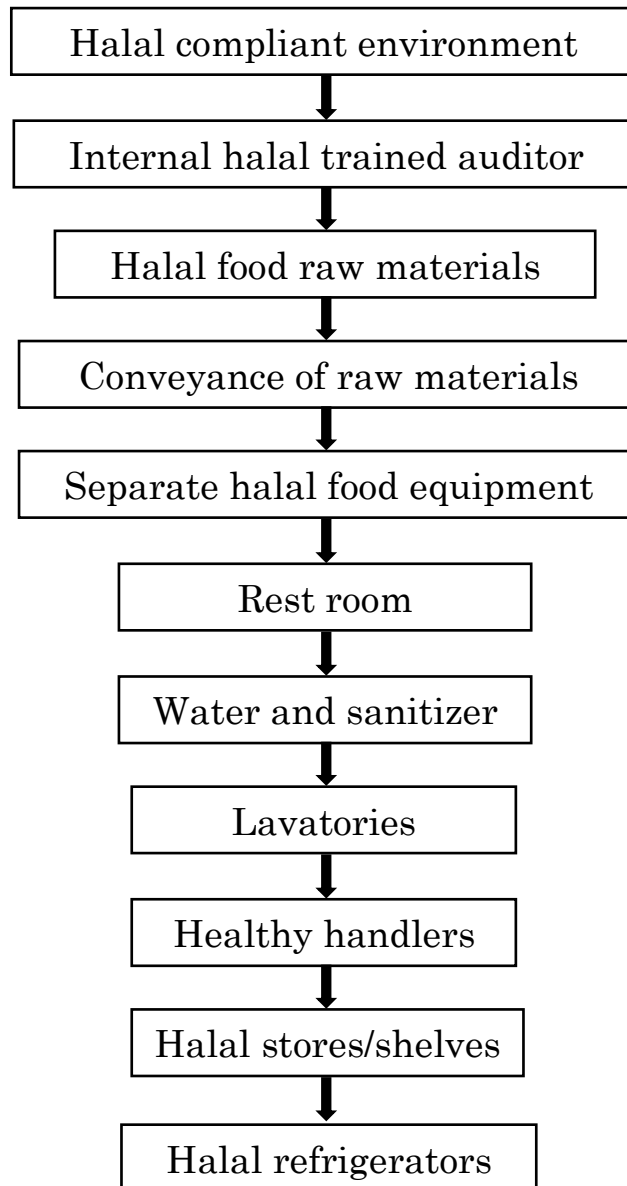


Fig 2.9 Halal food certification conceptual model

## MODEL C

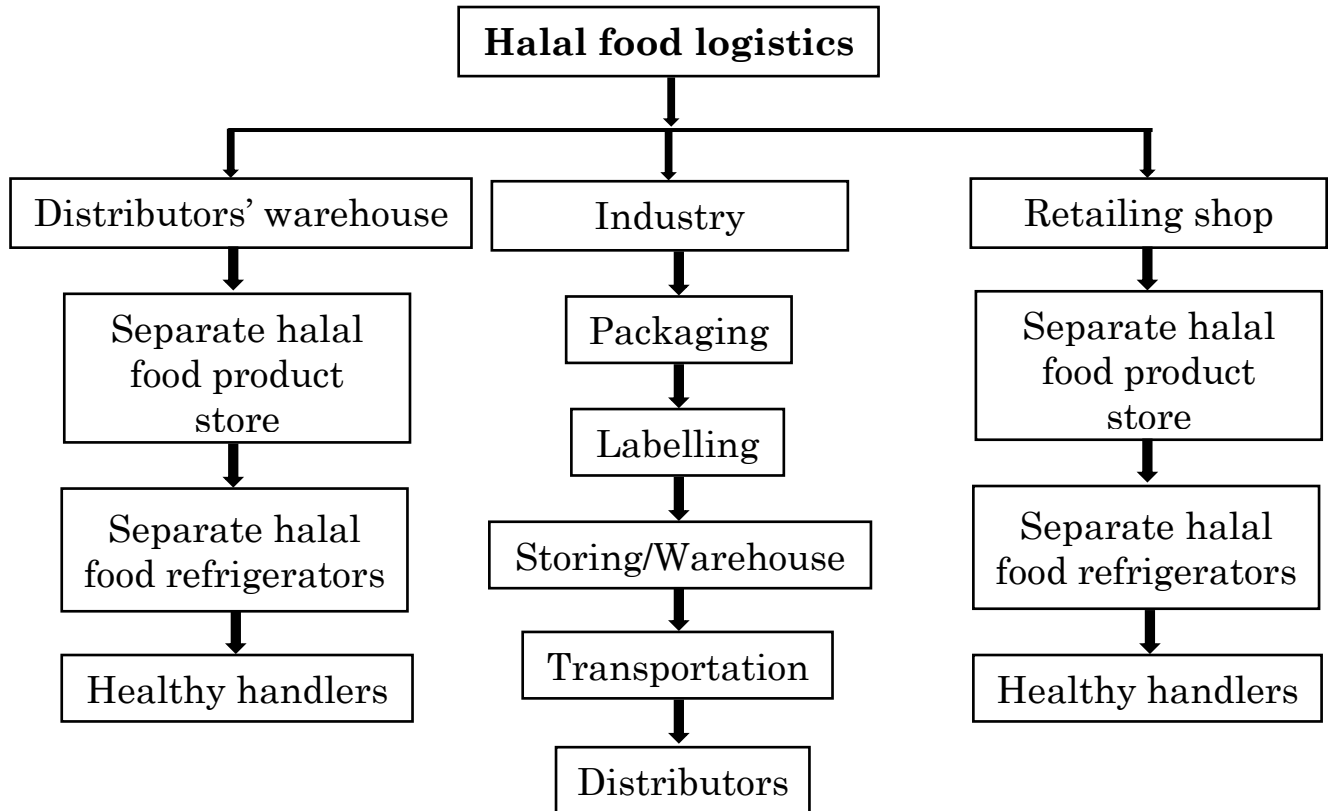
### HALAL FOOD PROCESSING/HALAL HAZARD CRITICAL CONTROL POINTS (HHCCPs) MODEL



**Fig 2.10 Halal food processing/halal hazard critical control points (hhccps) model**

## MODEL D

### HALAL FOOD LOGISTICS/HALAL HAZARD CRITICAL CONTROL POINTS (HHCCPs) CONCEPTUAL MODEL



**Fig 2.11: Halal food logistics/halal hazard critical controlpoints (hhccps) conceptual model**

### 2..3.8 Chapter Summary

Most previous works on *ḥalāl* food were carried out in foreign countries. These research works do not represent Nigeria experience. In Nigeria, and specifically in the South West, most researchers focused on food production and food processing based on the secular operations. The few works on *ḥalāl* food were written on handling of *ḥalāl* beef and abattoir operation such as the works of Oyelakin (2016) and Situ (2016). No existing work has studied correlates of *ḥalāl* food on Muslim consumers, primary and processed food workers. No research work has been directed to study the health workers' involvement in the operation of *ḥalāl* food production. As *ḥalāl* food industry is still at the infancy level in Nigeria, no work has been carried out to investigate the operation of the existing *ḥalāl* certification bodies. The wide literature vacuum justifies the relevance of this research work.

The Qur'an and the Sunnah deal with the prohibition of meat of *ḥalāl* animals basically on the way the animals are slaughtered. They mention *ḥalāl* and *ḥarām* animals. They do not treat animal meat products and food and meat processing of modern time. This justifies the relevance of this study. From the review of the Qur'an 'ayāt and the Sunnah of the Prophet, the opinions of the Qur'an exegetes and early Islāmic jurists on *ḥalāl* food, the prescription of *ḥalāl* food is limited to identification of *ḥalāl* animals and *ḥarām* meats, traditional slaughter of animals for consumption and conditions that make *ḥalāl* animals to become *ḥarām* through the ways the animals lives are terminated. There is also divergence of opinions among the jurists because of their different views of the knowledge and interpretation of some contexts of the Qur'an 'ayāt and *Hadith* on *ḥalāl* meat. As at the time of their contributions, industrial food products arising from advanced technology were not in existence so their works were limited to what existed then. The Qur'an, the *Sunnah*, the works of the exegetes and early Islāmic jurists are theoretical and literary contributions rather than practical administration of the phenomenon. This work fills the vacuum.

From the various literary works of the previous researchers on *ḥalāl* food concept, it is established that situation in one country differs from another. Thus, it makes their results to be contextual and geographical. This means that what is applicable in one country is different from another. This justifies the relevance of this study for effective

and efficient administration of *ḥalāl* food since little has been done on *ḥalāl* food in the region- South West, Nigeria.

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## CHAPTER THREE

### RESEARCH METHODOLOGY

#### 3.0 Preamble

This chapter discusses and justifies the research methodology employed in accomplishing the objectives of this study. The layout covers research design which showcases research philosophy and research paradigms of research philosophy, research approach and justification of the research design adopted; area of study and population; sampling and sample size; method of data collection; ethical considerations; method of data analysis and validity of instruments.

#### 3.1 Research design

Research design is the structure adopted in carrying out a study. It includes the outline of what the investigator will do and strategies he will employ to carry out the research. Survey research design was used in this research adopting quantitative and qualitative techniques using questionnaires, interviews and empirical observation. Empirical observation presents the result from market survey carried out to observe the *ḥalāl* status of food products and *ḥalāl* manufacturers as presented in chapter four. Questionnaires were used to answer research question one to four while in-depth interviews were used to answer research question five.

##### 3.1.1 Research philosophy

Philosophy is a structured way of thinking in approaching an issue or a phenomenon<sup>1</sup>. It is taken as personal outlook or viewpoint of a person or a school of thought in academics. It is the basic principles of a discipline. Thus, philosophy of research is the principles in use towards carrying out a research either empirically or theoretically. It is seen as a belief about the way in which data about a phenomenon should be gathered, analysed and used.<sup>2</sup>

### 3.1.2 Research paradigm

A paradigm, as viewed by Thomas Kuhn, is a theoretical perspective that is shared and recognised by the research community of a discipline that is based on the previous achievements of the discipline and that guides research in terms of the choice of facts to be studied, the object, the formation of hypotheses and implementation of scientific research tools. It is seen as a worldview or a set of assumption about how things work. A paradigm is also seen as a standard or model followed by a researcher in carrying out his research. Research paradigm is grouped mainly into four major paradigms. These are positivism, pragmatism, realism and interpretivism.<sup>3</sup> it is core to choose an appropriate paradigm(s) in carrying out ones proposed research. In this study, positivism and interpretivism paradigms are suitable and employed. Thus, the two paradigms employed in this research are given some space of discussion in this segment.

**Positivism paradigm:** It is usually based on empirical observation and adoption of theory to obtain results of the study. Thus, the results cannot be influenced by the researchers or any stakeholders in the research activities. It is used in large samples and mostly adopted in quantitative researches.<sup>4</sup>

**Interpretivism paradigm:** This is also referred to as constructivism. It is opposite to positivism. The results of the research are interpreted according to the perception of the researcher subjectively. The strategies of interpretivism include interview, document review and observation.

In this study, both positivism and interpretivism paradigms are suitable. The research is empirical and scientific in nature and thus, with positivism, neither the researcher nor the respondents can influence the results or infer any subjective judgement in responding to the questionnaires. The study focuses on large population size thus, positivism is most appropriate to get good sample for the study. As positivism employs empirical observation, positivism would equally assist to get reliable data, accurate, factual and objective results from the study. In addition, interpretivism paradigm is relevant and employed since the research involves interview to analyse the data collected from the interviewees.

### 3.1.3 Approach and justification of research design

Research approach is a plan and procedure that consists of the steps which indicate method of data collection, analysis and interpretation. Research approach is divided into two categories. These are data collection and data analysis. Quantitative and qualitative approaches are designed for data collection procedure; and deductive and inductive approaches are designed for data analysis<sup>5</sup>. However, the combination of the two- deductive-inductive approach is employed in some researches<sup>10</sup>.

Deductive approach tests the validity of assumptions (or theories or hypotheses) in hand. John Dudovskiy gave the sequence of deductive approach starting from theory to confirmation/rejection as illustrated below<sup>6</sup>.

Theory  $\implies$  Hypothesis  $\implies$  Observation/Test  $\implies$  Confirmation/Rejection

Deductive reasoning is based on general to specific. If one says “all planets orbit the sun, the earth is a planet; therefore, the earth orbits the sun”. This statement starts from general to specific as it finally specified that earth moves round the sun. The statement intends to establish to us that earth is not stationary but started by telling us the characteristic of all the planets to establish its fact. Thus, it is a top-down approach. It admits the adoption of existing theories to carry out a study. It involves formulation and use of hypotheses to test the relationship between variables of study of whose results can be accepted or rejected. Deductive approach is mostly employed in a quantitative research study.

Inductive approach is a method of studying a number of individual cases to generalise a situation. It takes a bottom-up approach. The result of the study can be used to formulate a theory. It is from specific to generalisation. If one says: “a dove is a bird, it can fly thus, all birds can fly”. Dove is a type of bird which can fly. Therefore, since dove is a bird and can fly, that means it can be submitted that all birds can fly. It is commonly adopted in qualitative research study<sup>7</sup>. Inductive-Deductive approach is the combination of the two previous approaches to reasoning. The combination of the two approaches- Deductive-Inductive approach suits this study and was thus used in the study.



### **3.2 Study area and population**

The research was carried out in South West geo-political zone of Nigeria. South West region of Nigeria consists of six states. These are Ekiti, Lagos, Ogun, Ondo, Osun and Oyo States. The total number of the targeted group of a study is the research population. When a very large or limitless group is being considered it is called continuous population but if a specific group such as a class in a school is used for the study it is called discrete population<sup>35</sup>. In this regards, different populations were studied. In this research work, Muslim consumers, health workers, primary food workers, processed food workers and *halāl* certification bodies in South West, Nigeria represent the populations. The Muslim consumers, primary food workers and processed food workers fell under continuous population while health workers fell under discrete population.

### **3.3 Sampling procedure and sample size**

Probability sampling and non-probability sampling are the two major sampling design usually adopted by researchers. With probability sampling, every unit in a population has equal chance with the other to be sampled for the study<sup>39</sup>. Probability sampling is also known as random sampling. Non-probability sampling, however, does not give all units equal chance to be a sample in the study rather, the researcher select a sample he considers more relevant and useable for the study. For this study, more than one sampling techniques were adopted because of the various targeted respondents. For studying correlates of *halāl food* among Muslim consumers, food service providers and health workers in the South West, Nigeria, a non-probability sampling was employed.

In this study, the researcher followed C.R Kothari, (2004) sampling technique to achieve a good representation of the population being studied.<sup>8</sup> Kothari recommends that the population of the study must be designed. He states that the population should be broken down to sampling unit which could be based on geographical location e.g Nigeria, Oyo state etc or construction unit like social unit. Examples are schools, peer groups, families or individuals.

In this study, sampling unit is South West Nigeria (Lagos, Abeokuta, Ibadan, Osun, Ekiti and Ondo). The samples were chosen from the six states of the South West,

Nigeria from the capital city in each state considering their level of urbanity. With this recommendation, the populations in this study were Muslim consumers, health workers food service workers (primary and processed food workers) and *halāl* certification bodies in South West, Nigeria.

The units were further broken down to sampling frame. Thus, the sampling frames in this study for Muslim consumers included mosques, Islamic organisations and schools. The sampling frames for health workers were water supply and environmental, veterinary and NAFDAC units. The sampling frames for primary food workers were abattoirs, restaurants, cafeteria/canteens, street food hawkers and poultries. The sampling frame for processed food workers were food companies, distributors and retailers of industrial food products from each capital city of the states being studied.

There is a stipulated sample size for a particular population size to have a good representativeness and reliability of the sample. B.V. Krejcie and D.W. Morgan's Determining Sample Size for Research recommendation was followed in this study. Finally, the questionnaires were distributed using convenience and purposive sampling techniques.

A total of two thousand two hundred and twenty three (2223) copies of questionnaire were conveniently administered among the Muslim consumers. This was employed because the population is large and the size of the population is difficult to access by the researcher. Convenience sampling technique favours proximity, it is not complicated and it saves time and economical. Convenience sampling technique is mostly used by researchers. Purposive sampling was employed in the administration of questionnaires among food service providers and food health workers. A total of two hundred and ninety (290) copies of questionnaire were conducted among the primary food vendors, 175 copies of questionnaire were administered among the processed food workers, 525 copies of questionnaire were administered among the food health workers. Also, in-depth interviews were purposively conducted with eight (8) personnel involving the Chief Executive Officers and other members of *halāl* food certification bodies in the region of study.

### 3.4 Research instruments

Questionnaire is considered as the heart of a survey research. To develop a good questionnaire for a study, it is significant to have a good and appropriate wordings, arrange the items in order and provide appropriate response options so that the respondents would not be influenced. Rensis Likert scale which is close-ended was employed in this study. Likert scale (close ended items) involves presenting people with five options about the item-statements measuring the variables.<sup>9</sup> The options are Strongly Agree, Agree, Neutral, Disagree, and Strongly Disagree. In some cases, extreme-end questionnaire was used. Numbers was assigned to each of the responses. The responses were coded and then summed across all items to produce a score representing the attitude towards the variables.

The questionnaires used in this study were constructed by the investigator (researcher). Questionnaire guidelines of Punch (1998), Ajzen Icek (n.d) and Peterson were followed after intensive reading of related materials on *ḥalāl* food, selection of research framework and discussion with some experts in Islamic jurisprudence, some Islamic clerics and some Muslims. The variables were mapped-out. For Muslim consumers, demographic factors (gender, ethnicity, age, occupation, level of education and state of residence), awareness, knowledge, perception, attitude, subjective norms, perceived behaviour control, religiosity, *ḥalāl* knowledge, *ḥalāl* terms, *ḥalāl* food certification, *ḥalāl* food logistics, are mapped-out and described in the questionnaire. The following variables were mapped-out from health workers, primary and processed food workers' segments of the questionnaires: Demographic factors, awareness, knowledge and perception of *ḥalāl*, *ḥalāl* terms, *ḥalāl* slaughter, certification and logistics except *ḥalāl* slaughter that was not included in the processed food sector.<sup>10</sup>

As recommended by Punch that the researcher should choose appropriate measuring technique to be used in the questionnaire, in this study, closed-ended questionnaire technique developed by Rensis Likert was used for the questionnaire. This enabled the respondents to freely express the degree of agreement and disagreement with the item-statements in the questionnaire which was used for statistical analysis. Likert scale is considered because it is easier to understand for the respondents and enables them to provide answers faster to the item-statements compared to open-ended type.<sup>11</sup> Item-

statements for each construct (variable) was formulated after intensive reading of related materials on *halāl* food, selection of research framework and discussion with some experts in Islamic jurisprudence, some Islamic clerics and some Muslims among the targeted population from the pilot study as recommended by Ajzen Icek (1991) for TPB.<sup>12</sup>

The first draft of the questionnaire was previewed to ensure content validity. The questionnaires were given to five experts from five different universities both at home and abroad. They were Dr Adebayo, Department of Religious Studies, University of Ilorin, Dr Uthman I. O., Department of Arabic and Islamic Studies, University of Ibadan, Prof. Luqman Zakariyah, chairman Halal Compliance and Food Safety Limited (HaCFoS), International University Islam Malaysia, Prof. Oreagba (a toxicologist and chairman of Halal Certification Authority (HCA), Lagos), Lagos State Teaching Hospital, and Prof. Shittu Taofik, College of Food Science, Federal University of Agriculture, Abeokuta, Ogun State. The questionnaires were also previewed by a group of nineteen Masters' students towards ensuring its content validity, at the Department of Arabic and Islamic Studies, University of Ibadan which was led by the supervisor. It was finally attested to and approved by the supervisor of the investigator. However, before the approval by the supervisor, the questionnaires were also previewed by an English expert at university level to assess the readability of the item-statements.

A pre-test administration was conducted for the second draft as recommended by Punch.<sup>22</sup> This was carried out among 100 Muslim consumers and 30 respondents each from among the health workers, primary food and processed food workers. Based on the feedback, good items were selected for each construct as the last step (step six) of Punch recommendations. A minimum of five item statements was recommended by Icek Ajzen to measure a construct. The constructs in this study have been listed in this unit and no construct has less than five item-statements. Ajzen recommends that all item-statements must be tested on alpha coefficient and that all items should reach an acceptable degree. Thus, any item-statement that does not reach acceptable degree of alpha coefficient should not be included in the questionnaire. Ajezn recommends that the validity and reliability of the questionnaires should be explored and confirmed. Thus, the validity and reliability of these questionnaires were tested using Exploratory Factor Analysis (EFA) and Cronbach's alpha co-efficient respectively.<sup>13</sup>

Peterson (2000) guidelines for writing questionnaires were also read. The guidelines are given an acronym "BRUSO" which stands for Brief, Relevant, Unambiguous, Specific and Objective.<sup>14</sup> These were considered and observed in constructing the item-statements of the questionnaires. Items on the constructs were constructed by the

investigator, however, some questionnaires constructed by previous researchers in the same field were read as replicas and/or guides in constructing the instruments (questionnaires).

### **Research variables**

**Dependent variables:** Perception

**Independent variables:** awareness, knowledge, attitude, subjective norms, perceived behaviour control, religiosity, *ḥalāl* certification, *ḥalāl* knowledge, *ḥalāl* slaughter, *ḥalāl* term and demographic factors (gender, ethnicity, age, occupation, level of education and state of residence),

### **3.5 Methods of data collection**

Data were collected adopting both primary and secondary sources of data collection methods.

Primary data are first-hand information collected from a person who directly involves, witnesses, observes or has information or knowledge on the issue being investigated. It also includes report of the researcher through direct observations and interviews. In this regards, questionnaires, interviews and direct observations and focus group discussions were used. The questionnaires and interviews were conducted covering the selected stakeholders in *ḥalāl* food and food productions within the coverage of the study. Questionnaires were used because it can cover a large number of respondents and a wider area. It also prevents the researcher from influencing the results. Secondary source of data collection is a process of data retrieval from already documented data or source. Books, journals, theses, newspapers and empirical materials were studied. Websites were visited to retrieve relevant online information.

The questionnaires were administered by the researcher and three research assistants to collect data on the constructs of the study- *ḥalāl food* certification, *ḥalāl food* logistics, awareness, attitude, subjective norms, perceived behavioural control, religiosity, *ḥalāl* knowledge and knowledge of Arabic *ḥalāl* terms. Data collection was carried out with exclusive focus for a period of four months from the month of January through April, 2020. The researcher paid a notification visit to all places where the questionnaires were conducted before the actual administration of the questionnaires. The respective population (sample) accepted their participations and contributions.

Most of the respondents as a matter of religious obligation valued the spirituality of the nature of the research. Samples of the questionnaires were given to the units of the population visited before the actual data collection. The respondents at the various units were sensitised and educated on how to fill the questionnaires and they were instructed and advised to ask questions where any of them found the item-statements not understood. They were assured of confidentiality as regards their responses. They were advised to be objective and sincere in the responses to contribute to a reliable and realistic feedback and results of the study. In each of the units, 40 minutes was allocated to administer the questionnaires and copies of the questionnaires were collected on the spot after answering them and recorded before the data was entered in Statistical Package for Social Sciences (SPSS). However, none of the respondents asked question on the ambiguity of the item-statements validating the reliability and accuracy of the item-statements and the result of the pilot study of the questionnaires.

### **Ethical consideration**

The questionnaires were administered by the investigator. He collected the copies of the questionnaires from the respondents after ticking the opinions of their choices on the items. The respondents were orientated on how to fill the questionnaire without influencing their interests. A guide statement is attached with each copy of the questionnaires that contains information that sensitises and guides the respondents about the study. The document also contains the roles of the researcher and the respondents during the conduction of the questionnaires. The investigator and his team members did not interrupt during the administration to get clean results. The investigator did not collect the questions back from the respondents until they all submitted after satisfactorily completed them. They all submitted within the given time (40 minutes). The respondents were assured of confidentiality and anonymity. The environment was secure to protect the respondents from hazards and risks that might result in their involvement in contributing to this study.

### **3.6 Method of data analysis**

The questionnaires were conducted physically by the researcher and the research assistants. The questionnaires were collected back mostly on the spots. However, some questionnaires were collected back later as some respondents could not answer the questionnaires immediately. The data were collated, sorted appropriately and edited to

verify the eligibility of the respondents and affirmed whether they fall under the targeted group. The investigators also checked the missing data. However, there was no missing data resulting from the effectiveness of the administration of the questionnaires.

The data were then coded to convert the observations and measurements used into the form suitable for SPSS to ensure clarity and easy computation.<sup>15</sup> The data were captured into SPSS version 24 and cleaned. The cleaning otherwise known as data cleansing or data scrubbing was done by deleting all incorrect values or errors and correct values were re-entered. This was done for accuracy and consistency of the data.

Descriptive analysis, Exploratory Factor Analysis, Pearson correlation, ANOVA and Multiple Linear Regression were employed in analysing and interpreting the data collected. The instruments were used as well to analyse the relationship between dependent and independent variables. After screening the data, the investigator confirmed that there were no missing values in the data using exploratory data analysis. In determining the influence of the independent on the dependent variables Pearson correlation and ANOVA statistical tests were adopted while MLR was used to test the significant relationships between the independent variables and dependent variables as hypothesised.

### **3.7 Validity of Instruments**

In research terms, validity refers to the accuracy and truth of the data and findings that are produced. It refers to the concept that are being investigated, the people or objects that are being studied, the method by which data are collected and the findings that are produced. However, there are different types of validity. These are: face validity, content validity, internal validity, criterion related validity, external validity and construct validity.<sup>16</sup>

In respect to questionnaire construction, there is a need to examine the meaning of some of the types of the validity. Three types of validity are examined as related to this study vis a vis face validity, content validity and construct validity and reliability. Construct validity and reliability tests- Cronbach's alpha co-efficient and exploratory

factor analysis- were carried out in this study using Statistical Package for Social Sciences (SPSS) version 24.

**Face validity:** This refers to the extent to which the measuring instrument measures the subject it is designed to measure<sup>26</sup>. Do the item statements measure, for instance, Islamic Studies that it is designed for but not Philosophy or Social Studies? Face validity takes care of such question. Going by this, the questionnaires were given to five university lecturers who are actively involved in research to review and comment on the items for improvement. Some items were suggested on some construct(s).

**Content validity:** Content validity takes care of practical quality of the test and applicability of the content to a subject matter- content universe. This is similar to face validity except that the items are scrutinized to see that they do not convey ambiguous messages that can be misconceived and misinterpreted by the respondents. Five resource persons consisting of Islamic Studies, health sector and *halāl* food organisations acknowledged to be experts in the topic area were involved in the validation of the items.

**Construct validity:**

This refers to the degree to which a research instrument measures a variable or construct of study. Do the items measure or capture the subject matter- the variable of test? Are the test items not overlapping? Are there not outliers in the test items? Exploratory Factor Analysis was used to analyse this. Factor analysis is used to reduce a mass of information (items) to a manageable size or a fewer number and the instrument would still be able to measure the construct validly and reliably.

Under Muslim consumers eleven variables were measured; under primary food workers, eight constructs were measured; under processed food workers, seven constructs were measured; and under health workers, five constructs as depicted in the Table below. The correlation Tables for the EFA, which are depicted in the appendix, show that none of the items was highly correlated with the others. All the variables were greater than the factor loading criterion of more than .40 in one extraction.



**Table 3.1 Variables of the study**

<b>Variables</b>	<b>No. of items</b>
<b>Muslim consumers</b>	
1. Awareness	12
2. Knowledge	12
3. Perception	9
4. Attitude	10
5. Subjective norms	6
6. Perceived behavior control	7
7. Behavioural intention	7
8. Religiosity	14
9. Certification	7
10. Logistics	8
11. Halal terms	16
<b>Primary food workers</b>	
1. Awareness	10
2. Knowledge	8
3. Perception	8
4. Knowledge of halal slaughter	12
5. Awareness of h Certification	5
6. Perception of certification	7
7. Logistics	6
8. Halal terms	16
<b>Processed food workers</b>	
1. Awareness	11
2. Knowledge	11
3. Perception	9
4. Certification	11
5. Logo	11

6. Logistics	9
7. Halal terms	16
<b>Health workers</b>	
1. Awareness	12
2. Knowledge	12
3. Perception	9
4. Halal slaughter	6
5. Halal terms	16

**Reliability:** An instrument is considered to be reliable if it consistently performs the function it is designed to perform. Reliability of the item-statements is measured by its ability to catch what it is designed or constructed to perform when used repeatedly. A clock is said to be reliable if it tells accurate time at a point in time. Likewise, a tape rule, ruler or thermometer is said to be reliable and has internal consistence when it measures what it is designed to measure and when used repeatedly and it gives same result. An item is reliable if it performs the function it is designed to perform. So, this is referred to internal consistency or consistency over time. If same items are administered second time or several times and they give scores stability, then the items are consistent. This is called consistency overtime.<sup>27</sup> This is by test re-test administration. Cronbach's alpha co-efficient was used to determine the reliability of the instrument used in this study using SPSS version 24 as considered most appropriate and mostly used in survey research of this nature. (Punch 1998).<sup>30</sup>

### **Pilot study**

A pre-field test of instruments or methods designed for the actual field work to detect any weakness(es) in the questionnaire items for proper and necessary corrections to achieve the targeted objectives is referred to as pilot study.<sup>17</sup> Thus, before the actual field work, pilot study was carried out by the researcher to determine the appropriateness of the methods or instruments sketched to explore the study.

The test was conducted among the respondents from the age of 18 years and above. Among the Muslim consumers, 100 respondents were randomly selected. For each of health workers, primary food workers and processed food workers' segments of the respondents, 30 participants were randomly selected. In constructing the questionnaire, unstructured interviews were conducted with some members of *ḥalāl* certification bodies. These bodies included Nigeria Supreme Council for Islamic Affairs (NSCIA), Muslim Ummah of South West, Nigeria (MUSWEN), Lekki Central Mosque (*Ḥalāl* Festival), *Ḥalāl* Research Center and *Ḥalal* Standard Development Trust (HASDAT).

In administering the questionnaires, the investigator played a role of facilitator. He explains how the respondents were expected to respond to the questionnaires and 40 minutes was given to complete the questionnaires. Respondents were instructed to ask question(s) wherever they have problem(s) in the questionnaires but at the end of the

exercise, none of the respondents asked any question(s). This established that language expression of the instrument was effective and confirmed the content validity carried out before the final pilot administration of the questionnaires. The result of this pilot study was used to improve the questionnaire used for the actual study.

### **Reliability of instrument**

To determine the internal reliability of the items, statistical tests were carried out using Statistical Package for Social Sciences (SPSS) version 24. The test was conducted on each construct in all the segments of the respondents. The correlation coefficient of the items used met the acceptable range point of 0.7. Hence, the questionnaires were valid and reliable to be used in carrying out this study.

**Table 3.2 Cronbach's Alpha results for pilot test for Muslim consumers, primary food, processed food and health workers**

Construct	No of items	Pilot study (Cronbach Alpha)
Awareness of <i>ḥalāl</i> food	12	.855
Knowledge of <i>ḥalāl</i> food	9	.945
Perception of <i>ḥalāl</i> food	12	.922
Attitude	10	.966
Subjective norms	6	.911
Perceived behavioural control	7	.892
Behavioural intention	7	.947
Religiosity	14	.939
Perception on <i>ḥalāl</i> food certification	7	.938
Perception on <i>ḥalāl</i> food logistics	8	.851
<i>Ḥalāl</i> terms	16	.871
<b>Cronbach's Alpha results for pilot test and actual study for primary food workers</b>		
Awareness of <i>ḥalāl</i> food	10	.842
Knowledge of <i>ḥalāl</i> food	8	.798
Perception of <i>ḥalāl</i> food	8	.864
Knowledge of <i>ḥalāl</i> slaughter	12	.805
Awareness of <i>ḥalāl</i> food certification	5	.923
Perception of <i>ḥalāl</i> food certification	8	.889
Perception of <i>ḥalāl</i> food logistics	6	.842
Arabic <i>ḥalāl</i> terms	16	.921
<b>Cronbach's Alpha results for pilot test and actual study for processed food workers</b>		
Awareness of <i>ḥalāl</i> food	11	.786
Knowledge of <i>ḥalāl</i> food	11	.866
Perception of <i>ḥalāl</i> food	9	.770
Perception of <i>ḥalāl</i> food certification	11	.882
Perception of <i>ḥalāl</i> food logo	11	.886
Perception of <i>ḥalāl</i> food logistics	9	.802
<i>Ḥalāl</i> Arabic terms	16	.942
<b>Cronbach's Alpha results for pilot test and actual study for health workers</b>		
Awareness of <i>ḥalāl</i> food	8	.830
Knowledge of <i>ḥalāl</i> food	6	.736
Perception of <i>ḥalāl</i> food	5	.857
Awareness of <i>ḥalāl</i> slaughter	6	.792
Arabic <i>ḥalāl</i> terms	16	.923

### **3.8 Chapter Summary**

The research design for this study was survey. The philosophical paradigm adopted was positivism. The researcher used questionnaires to collect data. Thus, quantitative technique was employed to analyse the data. The questionnaires were conducted directly by the researcher and his research team. Icek Ajzen, Peterson and Punch (1998) guidelines for drafting of questionnaires were followed. Content validity, construct validity, face validity, were checked before the conduction of pilot study. Pilot study test was also administered to confirm the reliability of the item-statements i.e its consistency iver time. A total of two thousand two hundred and twenty-three (2223) copies of questionnaire were conveniently administered among the Muslim consumers. Purposive sampling was employed in the administration of questionnaires among two hundred and ninety (290) primary food workers, 175 processed food workers, 525 food health workers and in-depth interviews with 8 personnel involving the Chief Excutive Officers and other members of *ḥalāl* food certification bodies in the region of study. The questionnaires were administered under a strict adherence to research ethics and norms and all the respondents cooperated ethically with the researcher. The populations were sampled following Kothari and Kerjcie's recommendations.

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**CHAPTER FOUR**  
**ANALYSIS AND INTERPRETATION OF HALAL FOOD PHENOMENON**  
**AMONG MUSLIM CONSUMERS, PRIMARY AND PROCESSED FOOD**  
**WORKERS**

**4.0 Preamble**

This chapter discusses the findings of the research based on the analysis and the interpretation of the data obtained from the responses of the respondents. This chapter presents the findings from the three different populations sampled which were Muslim consumers, primary and processed food workers. Thus, it answers research questions one, two and three to achieve the stated objectives in chapter one. The study employed questionnaire as the instrument. Questionnaire was administered to 2223 respondents among the Muslim consumers; 290 among primary food workers and 175 among the processed food workers. Similarity appears in gender, age, education, religion, state of residence, source of *halāl* food knowledge under the demographic profiles. Positions of the respondents and sections to which they belong in the sectors are examined among primary and processed food workers.



#### 4.1: Socio-demographic characteristics of Muslim consumers, primary and processed food workers

**Table 4.1 Distribution of socio-demographic profiles of Muslim consumers, primary and processed food workers**

Category	Muslim consumers	Primary food workers	Processed food workers
	Frequency/percent	Frequency/percent	Frequency/percent
<b>Gender</b>			
Male	1025 (46.1)	130 (44.8)	76 (43.4)
Female	1198 (53.9)	160 (55.2)	99 (56.6)
Total	2223 (100)	290 (100)	175 (100)
<b>Age</b>			
18-25	855 (38.5)	34 (11.7)	6 (3.4)
26-30	304 (13.7)	52 (17.9)	17 (9.7)
30-35	302 (13.6)	62 (21.4)	30 (17.7)
36-40	250 (11.2)	67 (23.1)	29 (16.6)
41-45	211 (9.5)	49 (16.9)	31 (17.7)
46-50	144 (6.5)	15 (5.2)	24 (13.7)
51-55	93(4.2)	7 (2.4)	25 (14.3)
56-60	37 (1.7)	1 (0.3)	11 (6.3)
60 above	27 (1.2)	3 (1.0)	2 (1.1)
Total	2223 (100)	290 (100)	175 (100)
<b>Ethnicity</b>			
Yoruba	2158 (97.1)	267 (92.1)	170 (97.1)
Hausa	39 (1.8)	17 (5.9)	1 (0.6)
Igbo	8 (0.4)	4 (1.4)	4 (2.3)
Others	18 (0.8)	2 (0.7)	
Total	2223 (100)	290 (100)	175 (100)
<b>Occupation</b>			
Government employee	430 (19.3)	-	-
Private employee	377(17.0)	-	-
Self employed	551(24.8)	-	-
Student	865 (38.9)	-	-
Total	2223 (100)	-	-
<b>Section</b>			
Abattoir	-	58 (20.0)	-
Bakery	-	47 (16.2)	-
Restaurant	-	68 (23.4)	-
Cafeteria/canteen	-	50 (17.2)	-
Food hawkers	-	32 (11.0)	-
Poultry	-	12 (4.1)	-
Environmental/water supply	-	-	-

NAFDAC		-	
Veterinary		-	
Others		23 (7.9)	
<b>Total</b>		<b>290 (100)</b>	
<b>Position</b>	-		
Manager/ Director		172 (59.3)	34 (19.4)
Cook		70 (24.1)	-
Servers		45 (15.5)	-
Washer/cleaner		3 (1.0)	-
Clerical officer		-	9 (5.1)
Receptionist		-	15 (8.6)
Mixer		-	5 (2.9)
Machine operator		-	8 (4.6)
Distributor		-	59 (33.7)
Retailer		-	4 (25.1)
others		-	1 (0.6)
<b>Total</b>		<b>290 (100)</b>	<b>175 (100)</b>
<b>State of Residence</b>			
Ekiti	353 (15.9)	49 (16.9)	30 (17.1)
Lagos	361 (16.2)	44 (15.2)	31 (17.1)
Ogun	399 (17.9)	49 (16.9)	31 (17.1)
Ondo	367 (16.5)	49 (16.9)	29 (16.6)
Osun	372 (16.7)	50 (17.2)	29 (16.6)
Oyo	371 (16.7)	49 (16.9)	25 (14.3)
<b>Total</b>	<b>2223 (100)</b>	<b>290 (100)</b>	<b>175 (100)</b>
<b>Religion</b>			
Islam	-	192 (66.2)	91 (52.0)
Christianity	-	97 (33.4)	84 (48.0)
Others	-	1 (0.3)	-
<b>Total</b>	-	<b>290 (100)</b>	<b>175 (100)</b>
<b>Level of Education</b>			
Primary	79 (3.6)	46 (15.9)	33 (18.9)
Secondary	500 (22.5)	109 (37.6)	84 (48.0)
NCE/OND	570 (25.6)	74 (25.5)	24 (13.7)
Degree/HND	868 (39.0)	60 (20.7)	34 (19.4)
M.A/MSc	151 ( 6.8)	1 (0.3)	-
Ph.D.	23 (1.0)	-	-
Others	32 (1.4)	-	-
<b>Total</b>	<b>2223 (100)</b>	<b>290 (100)</b>	<b>175 (100)</b>

Among the Muslim consumers, males and females significantly participated in the study. The result depicts that 1025 males representing 46.1% and 1198 females representing 53.9% of the participants were involved.

The respondents were predominantly Yoruba with 2158 respondents representing 97.1% of the total respondents of 2223. The fact being that the region of the study is predominantly occupied by the Yoruba group(s). Majority of the respondents among the Muslim consumers significantly fell between 18 and 25 years as reflected in the table above with 855 respondents which represents 38.5% of the total sample. However, respondents between the age of 26 and 30, 31 and 35, and 36 and 40 years contributed a significant number with 304 (13.7%), 302 (13.6) and 250 (11.2) respectively. This indicates that the respondents were dominated by young people between the age of 18 and 40 years. As depicted in the Table, most of the respondents were students with 865 respondents representing 38.9% of the total sample of 2223 participants. People who were self-employed and those who worked with government recorded a significant participation with 551 (24.8%) and 430 (19.3%) respectively. It is reflected that majority of the respondents were educated. Most of the respondents possessed Bachelor Degree/HND with 868 respondents representing 39.0% of the total sample with a significant size of those with NCE/OND and Secondary School Certificate holders with 570 (25.6%) and 500 (22.5%) respectively. The questionnaire was evenly distributed among the Muslim consumers across the six states of the region of study. In each state, 400 copies of the questionnaire were distributed and mostly collected at the spots. This made the lost copies to be minimal as shown in the Table above. Ondo State has the highest number of returned copies with 399 (17.9%). Osun and Oyo had a very close margin as 372 (16.7%) and 371 (16.7%) were returned respectively.

There was a significant involvement of both males and females in the conduction of the questionnaire among primary food workers. However, female respondents were slightly higher than the male staff as females recorded 160 (55.2%) against males who were 130 (44.8%). The Yorubas dominated primary food workers in the region of study. A total of 267 Yoruba which represented 92.1% of the total sample of 290 responded to the questionnaire. This suggests that the area of study is typically Yorubaland. Majority of the primary food workers were Muslims in the area of study with 192 (66.2%) respondents as shown in the Table. However, Christians also contributed a significant number. This implies that Muslims are many in primary food

section than any other religious faithful. Primary food workers were predominantly people who attended only secondary school as shown in the Table with a figure of 109 (37.6). However, workers with NCE/OND and Bachelor degree also contributed a significant number with 74 (25.5%) and 60 (20.7%) respectively. Workers at the restaurants, abattoirs and canteens participated most among the primary food workers with 68 (23.4%), 58 (20%), and 50 (17.2%) respondents respectively. The Table depicts that the managers in primary food sections in the area of study formed the major group who participated most in the conduction of the questionnaire with a high number of 172 (59.3%) out of 290 sample size. This suggests that the managers were usually less busy at the shops, restaurants or the cafeteria. All respondents in Osun State participated and returned all the questionnaire (50 copies) administered in the state. Ekiti, Ondo, Ogun and Oyo recorded 49 copies of the questionnaire out of 50 copies administered in each state. This indicates that majority of the participants returned their questionnaire. This was because the administrator/research assistants collected the questionnaire back at the scenes where the questionnaires was administered.

As shown in the Table, there was a significant involvement of both males and females in the conduction of the questionnaires among processed food workers. However, female respondents were slightly higher than the male staff as females recorded 99 which represented 56.6% against males of 76 (43.4%) respondents of the total sample of 175 respondents. The Table shows that the respondents were predominantly Yoruba with 170 respondents representing 97.1% of the total respondents of 175. The fact being that the region of the study is predominantly occupied by the Yoruba tribe(s). Majority of the respondents among the processed food workers significantly fell between the age of 31 and 55 years with age between 31 and 35 having 30 (17.1%) respondents; 36 and 40 with 29 (16.6%); 41 and 45 with 31 (17.7%); 46 and 50 with 24 (13.7%) and 51 and 55 years with 14.3% respondents. This indicates that the respondents were dominated by young people between the age of 18 and 40. Muslims and Christians predominantly participated in answering the questionnaire with 91 (52.0%) and 84 (48.0%) respectively. Distributors, retailers and directors are the major respondents among the processed food workers with 59 (33.7%), 44 (25.1%.7%) and 34 (19.4%) respectively as shown in the Table. Processed food workers were predominantly people who attended only secondary school with a figure of 84 (48.0%)

respondents. A total of 35 copies of the questionnaire were distributed across each state of the six states of the region of study. The result reveals that most of the respondents across the states responded and returned their questionnaire with Lagos and Ondo States having the highest number of returned questionnaire with 31 (17.1%) respondents from each state.

As shown in the Table, there was even involvement of both males and females in the conduction of the questionnaire among the health workers. However, female staff respondents were slightly higher than the male staff as females recorded 264 which represented 50.3% against males of 261 (49.7%) of the total sample of 525 respondents. Yoruba emerged as the dominants of the health sectors in the region of study. The Yoruba formed 501 (95.4%) of the total sample of 525 responded to the questionnaire. This suggests that the area of study is typically Yorubaland. The participants in this study majorly fell between the age of 31 and 45 years old as participants between 36 and 40 years were 101 (25.0%) being the highest group of the respondents. Participants between 41 and 45 years were 111 (21.1%) and those between 31 and 35 were 1101 (19.2%). This indicates that majority of the staff in health section were dominated by adult staffers. The respondents were predominantly Christians and Muslims in health sections with 266 (50.7%) and 253 (48.2%) Christians and Muslims respectively. The health sectors in the region of study were staffed with mostly Bachelor Degree/HND and NCE/OND graduates with 308 (58.7%) and 108 (20.6%) respectively. Equal copies (100) of the questionnaire were distributed across the six states of the region of study. It is revealed that most of the respondents across the states returned their questionnaire. Ogun and Oyo States had the highest number of returned questionnaire with 94 (17.9%) and 90 (17.1%) respectively. The researcher distributed 100 copies of questionnaire in each state of the study among the health workers according to their availability and accessibility. The Table depicts that water and environmental sanitation workers as major respondents with 265 (50.5%). Veterinarians also contributed significantly with 168 (30.1%) respondents. NAFDAC workers were in small numbers in their totality meaning that 96 (18.3%) respondents recorded was a significant number.

#### 4.2 Sources of *ḥalāl* food knowledge among Muslim consumers, primary and processed food workers

**Table 4.2: Distribution of sources of *ḥalāl* food knowledge among Muslim consumers, primary and processed food workers**

Source	Muslim consumers	Primary food workers	Processed food workers
	Frequency/%	Frequency/%	Frequency/%
Social media			
Radio	76 (3.4)	9 ( 3.1)	
Television	49 (2.2)	24 (8.3)	21 (12.0)
Newspaper	21 (0.9)	12 (4.1)	19 (10.9)
			23 (13.1)
Mosque	855 (38.5)	83 (28.6)	18 (10.3)
Islāmic programmes: ( <i>ta' līm/tadhki rah/ weekly Islāmic program (Asalatu)</i> etc)	817 (36.8)	(45.5)	62 (35.4)
Family	177 (8.0)	9 (3.1)	12 (6.9)
Friend	115 (5.2)	15 (5.2)	13 (7.4)
Teacher	113 (5.1)	6 (2.1)	7 (4.0)
Total	2223 (100.0)	290 (100.0)	175 (100.0)

Mosque and Islāmic programmes such as weekly Asalatu programmes, *ta'liim and tadhkirah* were the major sources of *ḥalāl* information as indicated in the Table. Mosque recorded 855 (38.5%) while Islāmic programmes recorded 817 (36.8%) respondents. However, there was a significant effort of family, peer groups and teachers in creating awareness of *ḥalāl* food among the Muslims consumers.

Among the primary food workers, majority of them acquired *ḥalāl* food knowledge mainly from Islāmic programmees as exhibited in Table 5.2 with a total of 132 (45.5%) respondents out of 290 sample size. This was followed by mosque with 28.6%. This can be interpreted that *ḥalāl* food concept has not been significantly advertised on radio, television and newspapers. Family, friends and teachers have little impacts in creating awareness of *ḥalāl* food among their relations, peers and students.

Islāmic programmes such as weekly *asalatu* programmes, *ta'liim* and *tadhkirah* were the major sources of *ḥalāl* food information among the processed food workers as indicated in the Table with a record of 62 (35.4%) respondents. This reflects that there is much to do by the mosques in promulgating *ḥalāl* food consumption in their activities. In addition, Muslims scholars and philanthropists should engage in advocating for *ḥalāl* food.

#### 4.3.1 Muslim consumers' awareness of *ḥalāl* food

**Table 4.3: Distribution of responses and mean of Muslim consumers' awareness of *ḥalāl* food**

Item	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	Standard Deviation
I am familiar with the term <i>ḥalāl</i> .	81 (3.6%)	55 (2.5%)	40 (1.8%)	907 (40.8%)	1140 (51.3%)	4.3360	.91934
I am aware of <i>ḥalāl</i> food.	46 (21%)	73 (3.3%)	56 (2.5%)	957 (43.0%)	1091 (49.1%)	4.3378	.84838
I am familiar with the term <i>ḥalālan tayyiban</i> .	78 (3.5)	197 (8.9)	258 (11.6)	957 (43.0)	733 (33.0)	3.9312	1.05443
I (do) hear of <i>ḥalāl</i> slaughter (killing).	135 (6.1)	213 (9.6)	126 (5.7)	903 (40.6)	846 (38.1)	3.9501	1.16841
I know some <i>ḥalāl</i> certification organisations in South West, Nigeria.	144 (6.5)	359 (16.1)	469 (21.1)	807 (36.3)	444 (20.0)	3.4714	1.16658
I have come across <i>ḥalāl</i> logos in some food products.	89 (4.0)	220 (9.9)	221 (9.9)	935 (42.1)	758 (34.1)	3.9235	1.09145
I know that pork and its products are <i>ḥarām</i> .	104 (4.7)	94 (4.2)	58 (2.6)	715 (32.2)	1252 (56.3)	4.3122	1.04044
I know that alcohol and its products are <i>ḥarām</i> .	91 (4.1)	59 (2.7)	28 (1.3)	665 (29.9)	1380 (62.1)	4.4323	.95995
Eating <i>ḥarām</i> food is punishable by <i>Sharī'ah</i>	98 (4.4)	131 (5.9)	137 (6.2)	830 (37.3)	1027 (46.2)	4.1502	1.06491
Eating <i>ḥalāl</i> food is rewardable by <i>Sharī'ah</i>	122 (5.5)	157 (7.1)	151 (6.8)	826 (37.3)	967 (43.5)	4.0612	1.12968
I have heard	125	288	357	854	599	3.6811	1.16328



of <i>ḥalāl</i> food promotions	(5.6)	(13.0)	(16.1)	(38.4)	(26.9)		
I have attended <i>ḥalāl</i> food festival(s)	293 (13.2)	524 (23.6)	395 (17.8)	544 (24.5)	467 (21.0)	3.1655	1.34958

In the Table above, it reflects that 1140 (51.3%) and 907 (40.8%) which indicates 2047 (92.1%) of the respondents strongly agreed and agreed that they were familiar with *ḥalāl* term. This formed the majority of the respondents. Only 136 (6.1%) strongly disagreed and disagreed that they were not familiar with the term ‘*ḥalāl*’ while 1.8% (40) respondents were neutral in their responses to the term. This implies that majority of the Muslim consumers were familiar with the term. It indicates that the Muslims have good knowledge of *ḥalāl* food terms. This is because *ḥalāl* is a nomenclature that is commonly used among Muslims to express acceptable behaviours and acts in their day to day activities and it is repeatedly re-echoed in the Qur’an. Even, the word *ḥalāl* is not unfamiliar among non-Muslims as some non-Muslim musicians used it in their songs.

The Table indicates that majority of the respondents (92.1%) strongly agreed (49.1%) and agreed (43.0%) that they were aware of *ḥalāl* food. Only 26.8% strongly disagreed, disagreed and neutral which showed that they were not aware of what *ḥalāl* food is or whether *ḥalāl* food is specially prescribed for the Muslims. In general, many Muslims were aware of *ḥalāl* food as a dictate of their religion. Also, 43.0% and 33.0% of the respondents agreed and strongly agreed that they were familiar with the term ‘*ḥalālān tayyiban*’ (lawful and wholesome). This indicates that 76% of the respondents which formed the majority of the respondents strongly agreed and agreed to the item. Only 24% strongly disagreed, disagreed and neutral that they were not familiar with the term ‘*ḥalālān tayyiban*’. It can be inferred that majority of the Muslims in the South West Nigeria have a good acquaintance of Islāmic food phenomenon. This goes with the commandment of Allāh as He says:

“And eat from things which Allāh has provided for you, lawful (*ḥalāl*) and good (*tayyib*), but fear Allāh in whom you believe.” Q5:91.

The Table depicts that *ḥalāl* slaughter was commonly heard by the Muslims in the South West as 78.7% of the respondents claimed that they heard of *ḥalāl* slaughter. Only 21.3% which was a minority of the respondents indicated that they did not hear of *ḥalāl* slaughter. Thus, it can be generalised that most Muslims in the South West heard of *ḥalāl* slaughter.

There is low knowledge on the existence or operation of *halāl* food certification organisations among the Muslims in the South West as only 56.3% of the respondents submitted that they knew that *halāl* food certification organisations are operating in South West. It was indicated that 43.7% claimed that they did not know that *halāl* food certification exists. This means that there is a need for advocacy and sensitisation on the operation of *halāl* food organisations among the Muslims in South West, Nigeria. It is shown in the Table that 73.2% of the respondents have come across *halāl* food logo(s) among the respondents. However, 24.8% indicated that they have not come across *halāl* logo while 9.9% stood neutral. The implication is that majority of the Muslims in South West, Nigeria checked the products to see whether they have *halāl* labels or not.

Also, the Table shows that 86.5% of the respondents have the knowledge that pork and its products are *harām* for Muslims consumption with 56.3% strongly agreed and 32.2% disagreed. Thus, it can be inferred that the Muslims in the South West, Nigeria possessed significant knowledge of the prescribed food for consumption by *Sharī‘ah*. The result was high because many Muslims are acquainted of the clean-cut prohibition of pig meat- pork as clearly stated in Q5:3.

حُرِّمَتْ عَلَيْكُمُ الْمَيْتَةُ وَالدَّمُ وَلَحْمُ الْخَنزِيرِ

“Forbidden for you are carrion and blood, and flesh of swine...” Q5:3.

Alcohol and its products is generally known among the Muslims of South West Nigeria to be prohibited by *Sharī‘ah* for Muslims consumption. This was confirmed by the responses in the Table above as 92% of the respondents indicated that they know that alcohol and its products is not *halāl*- lawful for Muslims consumption. Qur’an prohibits the in-take of alcohol in three places- Q5.90, Q4.43 and Q2.219. This has influence on the reactions of the respondents. It shows that many Muslims are aware that alcohol is directly prohibited in the Qur’an as Allāh says:

يَا أَيُّهَا الَّذِينَ آمَنُوا إِنَّمَا الْخَمْرُ وَالْمَيْسِرُ وَالْأَنْصَابُ وَالْأَزْلَامُ رِجْسٌ مِنْ عَمَلِ  
الشَّيْطَانِ فَاجْتَنِبُوهُ لَعَلَّكُمْ تُفْلِحُونَ

“O you who believe intoxicants and gambling ...are abomination of Satan’s handiwork. Eschew such (abomination) that you may prosper.”  
Q5: 9.0

The result contained in the Table suggests that the Muslims in South West, Nigeria believed that there is punishment for any Muslims who consume *ḥarām* food consciously without being under any condition(s) of relief to consume it. Only 4.4% of the respondents strongly disagreed, 5.9% disagreed and 6.2% were neutral that they did not know that anyone who eats *ḥarām* food is liable to punishment in Islām. The Table shows that 83.5% of the respondent testified to the statement “eating *ḥarām* food is punishable under *Sharī‘ah*.” This is in line with the knowledge of *Ḥadīth* of the Prophet against the consumption of *ḥarām* food as it prevents the grant of one’s supplication to Allāh where he narrated the story of a man who embarked on a long journey and got tired, thirsty and hungry. The man raised his hands unto Allāh praying to Him for succour. However, the man was brought-up fed and clothed from *ḥarām* sources and still lived on *ḥarām*. Then, the Prophet asked rhetorically how his prayers could be answered.<sup>1</sup> The result also corroborates Q99.8. Allāh says: “And he who does an itom’s weight of evil shall see (receive its reward) it.”

From the Table, it is shown that 43.5% and 37.3% of the respondents strongly agreed and agreed that consumption of *ḥalāl* food is rewardable by *Sharī‘ah*. This formed 80.8% of the respondents. Thus, it can be interpreted that majority of the Muslims in South West, Nigeria hold that consuming *ḥalāl* food attracts rewards from Allāh. Every good deed attracts reward and every good act is also considered as an act of *‘ibādah* and all acts of *‘ibādah* discharged with sincere intention are rewardable in Islām. This result corroborates Q99.7. Allāh says:

“Then he who does an itom’s weight of good shall see (receive its reward) it.”

The statement “I heard of *ḥalāl* food promotions” was supported by 65.3% as 26.9% strongly agreed and 38.4% agreed that they heard of *ḥalāl* food promotions while 34.7% did not support the statement as 5.6% strongly disagreed, 13.0% disagreed and 16.1% were neutral. The result indicates that there is a need for creation of awareness on *ḥalāl* food promotions and should be strategised to reach the targeted audience who are primarily the Muslim consumers.

Reactions of the respondents to the statement “I have attended *ḥalāl* food festivals” indicated that a low number of Muslims have attended one *ḥalāl* food festival or the other as only 45.5% of the respondents accepted that they attended *ḥalāl* food festival(s). This was depicted by strongly agreed 21.0% and agreed 24.5%. A total of 75.5% showed that they have never attended any *ḥalāl* food festival as reflected in the Table that 13.2% strongly disagreed, 23.6% disagreed and 17.8% were neutral to the statement. This suggests that *ḥalāl* festivals are not commonly celebrated, thus, there is a need for celebration of *ḥalāl* food in every part of the region to create more awareness of *ḥalāl* food.

Generally, the results from this Table indicate that Muslims in South West Nigeria were highly aware of *ḥalāl* food consumption and phenomenon as their principal and fundamental religious tenet with a mean of 3.979. To buttress this, many of the item-statements recorded high receptivity such as the statements “I am familiar with the term *ḥalāl*”, “I am aware of *ḥalāl* food” and “I know that alcohol and its products are *ḥarām*” recording 92.1%, 92.1% and 92% respectively. Even though *ḥalāl* food is consumed at the individual level among the Muslims in South West, Nigeria, as there are not many *ḥalāl* certified products, stores, restaurants or markets, the Muslims were strongly conscious of making sure they consume *ḥalāl* food.

#### 4.3.2 Knowledge of Muslim consumers on *ḥalāl* food

**Table 4.4 Distribution of responses and mean of knowledge of Muslim consumers on *ḥalāl* food**

Item	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Standard deviation
<i>Ḥalāl</i> food is only food prepared under strict compliance with Islāmic dietary law.	84 (3.8)	115 (5.2)	203 (9.1)	1025 (46.1)	769 (35.8)	4.05	.997
<i>Ḥalāl</i> is anything that is permissible by <i>Sharī'ah</i> .	54 (2.4)	87 (3.9)	95 (4.3)	965 (43.4)	1022 (46.0)	4.2659	.89851
<i>Ḥarām</i> is anything that is prohibited by <i>Sharī'ah</i>	97 (4.4)	96 (4.3)	77 (3.5)	882 (39.7)	1071 (48.2)	4.2299	1.01464
<i>Ḥalāl</i> animal must be slaughtered invoking Allāh's name before the meat can be edible for Muslim consumption.	39 (1.8)	60 (2.7)	68 (3.1)	782 (35.2)	1274 (57.3)	4.4359	.82453
Flowing blood from slaughtered animal is prohibited for Muslim consumption.	106 (4.8)	140 (6.3)	207 (9.3)	784 (35.3)	986 (44.4)	4.0814	1.10074
<i>Maytah</i> (carrion) is any animal that dies of itself.	76 (3.6)	115 (5.2)	318 (14.3)	915 (41.2)	796 (35.8)	4.0049	1.01407
<i>Maytah</i> is prohibited for Muslim consumption.	56 (2.5)	98 (4.4)	277 (12.5)	831 (37.4)	961 (43.2)	4.1439	.96936
Pig and pig products are	72 (3.2)	63 (2.8)	36 (1.6)	676 (30.4)	1376 (61.9)	4.4489	.91589

<i>ḥarām</i> in Islām.							
All carnivores and their products are <i>ḥarām</i> .	83 (3.7)	156 (7.0)	261 (11.7)	866 (39.0)	857 (38.6)	4.0157	1.05826
All water animals are <i>ḥalāl</i> according to <i>Sharī'ah</i> .	86 (3.9)	168 (7.5)	291 (13.1)	838 (37.7)	840 (37.8)	3.9798	1.07673
<i>Ḥalāl</i> food becomes <i>ḥarām</i> if contaminated with <i>ḥarām</i> food.	64 (2.9)	72 (3.2)	174 (7.8)	978 (44.0)	935 (42.1)	4.1912	.92270
<i>Ḥarām</i> becomes <i>ḥalāl</i> only in a critical health condition to save life or when under duress of attack.	78 (3.5)	122 (5.5)	257 (11.6)	924 (41.6)	842 (37.9)	4.0481	1.01382

Table 4.4 shows the knowledge of Muslim consumers on *ḥalāl* food. It is depicted with the responses of the participants to item one that the participants understood that only food that is prepared under strict compliance with Islāmic dietary law is *ḥalāl*. Food may be prepared in hygienic environment and animal is slaughtered similar to how it is prescribed or practised in Islām but still not *ḥalāl* if *Sharī‘ah* ethics are not upheld in the process. A total of 81.9% supported that *ḥalāl* food is only food prepared under strict compliance with Islāmic dietary law. However, 18.1% did not support the statement. This result reflects the good level of knowledge of *ḥalāl* food on the item among the Muslim consumers.

The participants showed their knowledge of *ḥalāl* food with 46.0% strongly agreed and 43.4% agreed which formed 89.4% of the respondents. They agreed that “*ḥalāl* is anything that is permissible by *Sharī‘ah*. Only 2.4% strongly disagreed, 3.9% disagreed and 4.3% were neutral.

*Ḥalāl* animal must be slaughtered invoking Allāh’s name before the meat can be edible for Muslim consumption. Allāh says:

فَكُلُوا مِمَّا ذُكِرَ اسْمُ اللَّهِ عَلَيْهِ إِنْ كُنْتُمْ بِآيَاتِهِ مُؤْمِنِينَ

“So eat of (meat) on which God’s name has been pronounced if you have faith in His signs.”Q6:118.

وَلَا تَأْكُلُوا مِمَّا لَمْ يُذْكَرْ اسْمُ اللَّهِ عَلَيْهِ وَإِنَّهُ لَفِسْقٌ

“Eat not of (meat) on which God’s name has not been pronounced.” Q6:121.

It was demonstrated by the respondents that they understood *ḥalāl* food concept as majority of them subscribed to the statement “*ḥalāl* food is anything that is prohibited by *Sharī‘ah*” as 87.9% of the respondents agreed to the statement. The result from the Table reveals that the Muslims in South West, possess good knowledge of *ḥalāl* concept by being strongly agreed 44.4% and agreed 35.3% that flowing blood from slaughtered animal is prohibited for Muslim consumers. Only 9.3% were neutral, 6.3% disagreed and 4.8% strongly disagreed. The strongly agreed and agreed is considered high and thus, suggests that Muslims in South West Nigeria possessed good knowledge of *ḥalāl* food concept.

*Ḥalāl* slaughter maintains and preserves meat quality. If the flowing blood completely gushes out from the slaughtered animal, it adds to the quality of the meat thus, flowing blood is not encouraged to be eaten as prohibited by Allāh (Aidros, 2005).<sup>2</sup>



“*Maytah* is any animal that dies of itself” was strongly agreed and agreed to with 35.8% and 41.2% respectively. However, 3.6% strongly disagreed, 5.2% disagree and 14.3% were neutral. This implied that Muslims in South West, Nigeria have good knowledge of *ḥalāl* food phenomenon.

Majority of the participants attested to the statement “*Maytah* is prohibited for Muslim consumption” with 43.2% strongly agreed and 37.4% agreed. This formed the majority of the respondents (80.6%). It can be inferred that Muslims in South West, Nigeria understood the concept of *ḥalāl* food considerably. *Maytah* is prohibited in Q5.3 for Muslim consumption. The result shows that Muslims are aware of the prohibition as a clean-cut injunction. Many Muslims know that any animal that dies of itself is *maytah*. *Maytatah* is known as *okunbete* or *gifa* in Yoruba language. Anybody who eats *okunbete* is considered uncultured, irreligious or dirty person among the Yoruba groups.

The respondents also attested to the statement “pig and pig products are *ḥarām*” as 61.9% strongly agreed and 30.4% agreed. This formed 92.3% of the respondents. This is considered high and thus can be generalised that Muslims in South West, Nigeria have good knowledge of *ḥalāl* food concept.

Knowledge of *ḥalāl* food concept was displayed by Muslim consumers by their responses to item “All carnivores and their products are *ḥarām* as 77.6% strongly agreed (38.6%) and agreed (39.0%) to the statement. As this is considered high, it suggests that the Muslims in South West, Nigeria have good level of knowledge of *ḥalāl* food phenomenon.

It is depicted in the Table above that 37.8% strongly agreed and 37.7% agreed to the statement “All water animals are *ḥalāl* according to *Sharī‘ah*.” This formed 75% of the respondents and considered high. Also, 13.1% were neutral, 7.6% agreed and 3.9% strongly disagreed. This formed only 24.6% and considered low. The results implied that majority of the Muslims or Muslim consumers have good knowledge of the concept of *ḥalāl* food. Allāh emphasises the lawfulness of water animal for Muslim consumption in the Qur’an thus:

أَجَلٌ لَّكُمْ صَيْدُ الْبَحْرِ وَطَعَامُهُ مَتَاعًا لَّكُمْ

“Lawful unto you is the pursuit of water-game and its use for food,- for the benefit of yourselves.” Q5:99.

From the Table, 86.1% of the participants exhibited their knowledge of *ḥalāl* food phenomenon as they accepted the statement “*ḥalāl* food becomes *ḥarām* if contaminated with *ḥarām* food.” Only 13.9% did not accept the statement. It can be inferred that majority of Muslim consumers understood *ḥalāl* food concept as a fundamental tenet of Islām.

Majority of the Muslim consumers submitted that *ḥarām* food can be eaten only in a critical health condition to save life or when under duress of attack. A total of 37.9% strongly agreed and 41.6% agreed to the statement. Only 3.5% strongly disagreed, 5.5% disagreed and 11.6% stood neutral.

It can be concluded from the Table, generally, with the mean of 4.158 of the variable, that the Muslim consumers have good knowledge of *ḥalāl* food phenomenon.

#### 4.3.3 Muslim consumers' perception of *ḥalāl* food

**Table 4.5 Distribution of responses and mean of Muslim consumers' perception of *ḥalāl* food**

Item	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	Standard deviation
Eating <i>ḥalāl</i> food purifies souls	67 (3.0)	63 (2.8)	99 (4.5)	898 (40.4)	1096 (49.3)	4.3014	.91198
Eating <i>ḥalāl</i> food fulfills one's religious obligation.	55 (2.5)	83 (3.7)	104 (4.7)	856 (38.5)	1125 (50.6)	4.3104	.91044
Eating <i>ḥalāl</i> food is a requisite to acceptance of supplications by Allāh.	50 (2.2)	71 (3.2)	135 (6.1)	903 (40.6)	1064 (47.9)	4.2865	.88757
Choosing to eat <i>ḥalāl</i> food is an act of obedience to Allāh.	55 (2.5)	52 (2.3)	70 (3.1)	800 (36.0)	1246 (56.1)	4.4080	.86145
<i>Ḥalāl</i> food prevents food poisoning.	92 (4.1)	179 (8.1)	217 (9.8)	795 (35.8)	940 (42.3)	4.0400	1.10180
<i>Ḥalāl</i> food improves and sustains personal health.	37 (1.7)	69 (3.1)	109 (4.9)	977 (43.9)	1031 (46.4)	4.3027	.83393
<i>Ḥalāl</i> food guarantees food safety.	53 (2.4)	108 (4.9)	148 (6.7)	976 (43.9)	938 (42.2)	4.1867	.92896
<i>Ḥalāl</i> food guarantees food quality.	59 (2.7)	103 (4.6)	200 (9.0)	955 (43.0)	906 (40.8)	4.1453	.94922
<i>Ḥalāl</i> food guarantees natural food taste.	79 (3.5)	132 (5.9)	304 (13.7)	906 (40.8)	802 (36.1)	3.9987	1.02730

From the statistics generated in Table 4.5, 49.3% of the respondents strongly agreed and 40.4% agreed that eating of *ḥalāl* food purifies souls. The percentage of the respondents who strongly agreed and agreed is considered high. This could be interpreted that Muslims in South West, Nigeria believed that *ḥalāl* food purifies souls. This suggests that *ḥalāl* food consumption is considered spiritual by the Muslims in the region.

Item 3 in Table 4.5 presents the perception of eating *ḥalāl* food as a requisite to acceptance of the worshippers' supplication. The result reflects that majority of the respondents strongly agreed 47.9% and agreed 40.6%. This is considered high and formed the majority with 88.5% of the respondents. Only 11.5% strongly disagreed, disagreed and neutral in their perception.

It is indicated in the Table that 56.1% strongly agreed and 36.0% attested to the statement "choosing to eat *ḥalāl* food is an act of obedience to Allāh". Thus, the total is considered high, meaning that majority of the Muslims in South West, Nigeria perceived and believed that consumption of *ḥalāl* food is an act of obedience to Allāh and consequently it is an act of *'ibādah* (worship) in Islām. Further more, majority of the respondents submitted that *ḥalāl* food is void of poison since it is prepared under perfect hygienic condition covered and stipulated by *Sharī'ah* as 81.1% of the respondents supported the statement "*ḥalāl* food" prevents food poisoning" with strongly agreed 42.3% and agreed 35.8%.

In exploring the perception of the Muslim consumers towards *ḥalāl* food, 90.3% submitted that *ḥalāl* food improves and sustains personal health as 46.4% strongly agreed and 43.9% agreed while 1.7% strongly disagreed, 3.1% disagreed and 4.9% was neutral to the statement. The percentage of strongly agreed and agreed is high. Thus, it can be interpreted that the Muslims in South West, Nigeria believed that when one takes *ḥalāl* food his health will improve and be sustained. Abdul Raufu and Ahmad (2012) asserted that many people consume *ḥalāl* food as it is considered to be healthy. Health reason created more awareness of *ḥalāl* food among the consumers.<sup>3</sup> This result supported the result submitted by Bonne et al (2017) from their findings that people consumed *ḥalāl* food for its health benefit and they have assurance that *ḥalāl* food is a healthy food.<sup>4</sup>

The item “*ḥalāl* food guarantees food safety” was supported by 86.1% of the respondents as 42.2% strongly agreed and 43.9% agreed. This is considered high and thus the result implies that the Muslims in South West, Nigeria believed that *ḥalāl* food is safe to consume. The result of Golnaz, et al (2010) supported that food safety is an accepted quality of *ḥalāl* food and established that food safety influence the awareness of *ḥalāl* food consumption. The result of this study corresponds to their result.<sup>5</sup>

The respondents hold that *ḥalāl* food is a quality food as 82.1% strongly agreed and agreed that *ḥalāl* food guarantees food quality. It can be generally inferred from the result that Muslim consumers in South West, Nigeria believed that *ḥalāl* food possesses good quality and guarantees food safety. Abdul Aziz and Chok’s (2013) result corroborates the submission of the respondents in the study as they asserted that food quality influences *ḥalāl* food consumption.<sup>6</sup>

It is also believed by the Muslim consumers of *ḥalāl* food in South West that *ḥalāl* food guarantees natural food taste as 36.1% strongly agreed and 40.8% agreed. Only 13.7% was neutral, 3.9% disagreed and 3.6% strongly disagreed. Those who did not support the statement “*ḥalāl* food guarantees natural food taste” constituted only 23.1%. This is considered low to the percentage of those who supported the item which was 76.9%.

The average mean of the items used to measure Muslim consumers’ perception of *ḥalāl* food is 4.220. This signifies that the Muslim consumers generally have a positive perception of *ḥalāl* food consumption.

#### 4.3.4 Attitude of Muslim Consumers' towards *ḥalāl* food

**Table 4.6: Distribution of responses and mean of attitude of Muslim Consumers' towards *ḥalāl* food**

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Standard deviation
I choose to buy <i>ḥalāl</i> food always	74 (3.3)	63 (2.8)	97 (4.4)	1003 (45.1)	986 (44.4)	4.2434	.91722
I consume <i>ḥalāl</i> food as spiritual' <i>ibādah</i> .	54 (2.4)	84 (3.8)	140 (6.3)	997 (44.8)	948 (42.6)	4.2150	.90185
I feel generally satisfied with <i>ḥalāl</i> food product.	44 (2.0)	55 (2.5)	71 (3.2)	943 (42.4)	1110 (49.9)	4.3585	.82470
I determine not to eat food whose source is doubted to be <i>ḥalāl</i> .	86 (3.9)	116 (5.2)	195 (8.8)	1025 (46.1)	801 (36.0)	4.0522	1.00134
My family always eats <i>ḥalāl</i> food	60 (2.7)	84 (3.8)	112 (5.0)	982 (44.2)	985 (44.3)	4.2362	.91222
I love to recommend <i>ḥalāl</i> food to people who are close to me.	52 (2.3)	66 (3.0)	103 (4.6)	967 (43.5)	1035 (46.6)	4.2897	.87041
I really decide not to eat food whose source is not <i>ḥalāl</i> .	73 (3.3)	95 (4.3)	139 (6.3)	989 (44.5)	927 (41.7)	4.1705	.95779
I really decide not to consume food that is prepared with non <i>ḥalāl</i> ingredients.	61 (2.7)	100 (4.5)	212 (9.5)	990 (44.5)	860 (38.7)	4.1192	.94622
<i>Ḥalāl</i> food product is more appealing to me.	53 (2.4)	59 (2.7)	111 (5.0)	999 (44.9)	1001 (45.0)	4.2758	.86328
I determine not to consume food that is prepared with non <i>ḥalāl</i> ingredients.	65 (2.9)	113 (5.1)	161 (7.2)	968 (43.5)	916 (41.2)	4.1502	.96375

Table 4.6 shows the result of the attitudes of Muslim consumers towards *ḥalāl* food consumption. Item 1 which is “I choose to buy *ḥalāl* food always” was supported/accepted by 44.4% strongly agreed and 45.1% agreed totaling 89.5%. This is considered high. Only 3.3% strongly disagreed, 2.8% disagreed and 4.4% stood neutral. The result indicated that majority of the Muslim consumers consumed *ḥalāl* food signifying their right attitude (positive) towards *ḥalāl* food is considered spiritual and as an act of *‘ibādah*. A total of 87.4% accepted that consumption of *ḥalāl* food is spiritual as 42.6% strongly agreed and 44.8% agreed to the statement. Only 12.5% did not accept the statement. This demonstrates that Muslim consumers have positive attitude towards the consumption of *ḥalāl* food.

Majority of the Muslim consumers submitted that they are satisfied with *ḥalāl* food products. This is evident from their responses as 49.9% strongly agreed and 42.4% agreed to the statement “I feel generally satisfied with *ḥalāl* food products.

As conscious Muslims, majority of the participants submitted that they did not eat any food which they were not certain of its source whether it was from *ḥalāl* or *ḥarām* source as 36% strongly agreed and 46.1% agreed to the statement “I determine not to eat food whose source is doubted to be *ḥalāl*. This is in line with the *ḥadīth* of the Prophet which states: *Al-ḥalāl bayyin*.

Majority of the respondents confirmed that their family always eats *ḥalāl* food as 44.3% and 44.2% strongly agreed and agreed respectively to the statement “My family always eats *ḥalāl* food.” The percentage is considered high and thus can be generalised that Muslim consumers in South West, Nigeria ensure that their family always consume *ḥalāl* food.

Majority of the Muslim consumers in South West, Nigeria exhibited a positive attitude to the consumption of *ḥalāl* food as 46.6% strongly agreed and 43.5% agreed to the statement “I love to recommend *ḥalāl* food to people who are close to me”. This formed 90.1% of the respondent and considered high. Only 9.9% of the respondents did not accept the statement.

A total of 41.7% strongly agreed and 44.5% agreed to the statement “I really decide not to eat food whose source is not *ḥalāl*.” This indicated that the majority of the

Muslim consumers would not consume any food except it is from *ḥalāl* source. Only 6.3% neutral, 4.3% disagreed and 3.3% strongly disagreed. The Prophet of Allāh warned against the eating of any food whose status is doubtful either through its ingredients or the source. The Prophet said:

From 'Abu 'Abdullahi al-Nu'mān bin Bashīr may Allāh be pleased with both of them (who) said: I heard from the Messenger of Allāh (SAW) saying: What is lawful is clear and what is unlawful is clear but between them are certain doubtful things which many people do not recognise. He who guards against doubtful things keeps his religion and honour blameless. But he who falls into doubtful things falls into what is unlawful just as a shepherd who pastures his animals round a preserved garden will soon pasture them into it...(Reported by both Al-Bukhāri and Muslim).<sup>7</sup>

The reactions of the Muslim consumers to the statement “I really decide not to consume food that is prepared with non-ḥalāl ingredients reveals their keenness in their positive attitude towards *ḥalāl* food consumption. Among the respondents, a total of 83.2% of the participants reacted positively to the statement while only 16.8% strongly disagreed, agreed and neutral to the statement. This established positive attitude of the Muslim consumers towards *ḥalāl* food consumption in South West, Nigeria.

From the respondents, 45.0% strongly agreed and 44.9% agreed to the statement “*ḥalāl* food is appealing to me.” Only 2.4% strongly disagreed, 2.77% disagreed and 5.0% neutral. Strongly agreed and agreed formed 89.9% of the total respondents. It is considered high. This suggests that majority of the Muslim consumers prioritise *ḥalāl* food products over any other food product and it is their favourite food product. Those who submitted to the statement “I determine not to consume food that is prepared with non *ḥalāl* ingredients forms 86.7% of the respondents. They care for *ḥalāl* ingredients in their choice to consume *ḥalāl* food. Only 33.3% of the respondent did not accept the statement.

The overall result from this Table depicts that the average mean of the variable is 4.211. This reveals that the Muslim consumers have positive attitude towards the consumption of *ḥalāl* food.



#### 4.3.5: Subjective Norms/Social factor

**Table 4.7: Distribution of responses and mean of Subjective Norms/Social factor**

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Standard deviation
My family can influence me to consume <i>ḥalāl</i> food.	111 (5.0)	72 (3.2)	124 (5.6)	998 (44.9)	918 (41.3)	4.1426	1.01381
My mosque can influence me to consume <i>ḥalāl</i> food.	75 (3.4)	74 (3.3)	90 (4.0)	976 (43.9)	1008 (45.3)	4.2452	.93328
My organisation can influence me to consume <i>ḥalāl</i> food.	62 (2.8)	91 (4.1)	158 (7.1)	965 (43.4)	947 (42.6)	4.1894	.93614
My friends can influence me to consume <i>ḥalāl</i> food.	56 (2.5)	87 (3.9)	180 (8.1)	978 (44.0)	922 (41.5)	4.1799	.92032
Our <i>Imām</i> /missionary can influence me to consume <i>ḥalāl</i> food.	71 (3.2)	56 (2.5)	82 (3.7)	921 (41.4)	1093 (49.2)	4.3086	.90660
My co-workers can influence me to consume <i>ḥalāl</i> food.	64 (2.9)	111 (5.0)	186 (8.4)	942 (42.4)	920 (41.4)	4.1439	.96750

Table 4.7 depicts the influence of subjective norms which are social or external factors in the behavioural intention of Muslim consumers in their choice for *ḥalāl* food. The item “My family can influence me to consume *ḥalāl* food” was accepted by 86.2% of the respondents as 41.3% strongly agreed and 44.9% agreed to the statement. They formed the majority and the percentage is considered high. It can be inferred that the choice for *ḥalāl* food is very significant. Thus, if a family member is well educated and sensitised on *ḥalāl* food, such can strongly influence the intention of other members of the family in their choice for *ḥalāl* food.

Subjective norm is confirmed as an influencer of behavioural intention from the result to the statement “My mosque can influence me to consume *ḥalāl* food” as the Table depicts that 45.3% strongly agreed and 43.9% agreed to the statement while 3.4% strongly disagreed, 3.3% disagreed and 4.0% are neutral to the item. The percentage for supporters to the statement was 89.2%. This is considered high. Thus, it indicates that mosque is an influencing determinant in behavioural intention in the choice for the consumption of *ḥalāl* food.

In the Table, it reflects that 42.6% and 43.4% which formed 86% of the respondents strongly agreed and agreed that they can be influenced by their organisations to consume *ḥalāl* food. This formed the majority of the respondents. Only 2.8% strongly disagreed and 4.1% disagreed while 7.1% respondents were neutral in their responses to the item. This implies that organisation has influence on the majority of the Muslim consumers in their choice for *ḥalāl* food in South West, Nigeria.

The result to the item statement “My friends can influence me to consume *ḥalāl* food” shows that friend is an environmental factor which influences the behaviours of people in consuming *ḥalāl* food. The Table depicts 41.5% strongly agreed and 44% agreed while 8.1% is neutral, 3.9% disagreed and 2.5% strongly disagreed.

The Table indicates that majority of the respondents (90.6%) strongly agreed (49.2%) and agreed (41.4%) that their imams can have influence in their choice for *ḥalāl* food as they can influence their behaviours in general. Only 3.2% strongly disagreed, 2.5% disagreed and 3.7% neutral showed that the imams could not influence their behaviours. In general, many Muslims in the area submitted that the imams have influence in the general behaviours of the congregants.

Also, 41.4% and 42.4.0% of the respondents agreed and strongly agreed that their co-workers can have influence in their choice for *ḥalāl* food. This indicates that 83.8% of the respondents which forms the majority of the respondents strongly agreed and agreed to the statement “my co-workers can influence my choice for *ḥalāl* food.” Only 2.9% strongly disagreed, 5% disagreed and 8.4% neutral. It can be inferred that majority of the Muslims in South West, Nigeria accepted that their co-workers can influence their behavioural intention towards the consumption of *ḥalāl* food.

The general results indicate that subjective norms- social factors such as family, teachers, peer groups, religious leaders and co-workers have influence on the general behaviour of Muslim consumers towards the consumption of *ḥalāl* food as the variable mean is 4.202. This confirms the *ḥadīth* of the Prophet which describes every one as a shepherd to one another. The Prophet stressed that the people around us are shepherds and guardians who control our behaviours in one way or the other. The Prophet said:

Abdullahi ibn Umar reported: The messenger of God (Allāh), peace and blessings be upon him said: Every one of you is a shepherd and he is responsible for his flock. The leader of people is a guardian and he is responsible for his subjects. A man is the guardian of his family and he is responsible for them. A woman is the guardian of her husband’s home and his children and she is responsible for them. The servant of a man is a guardian of the property of his master and he is responsible for it. No doubt every one of you is a shepherd and he is responsible for his flock. (Al-Bukhari, 6719 & Muslim, 1829).<sup>8</sup>

He also stressed the roles and influences of parents on the child as he said:

“Each child is born in a state of “*fitrah*” then his parents made him a Jew, Christian or a Zoroastrian, the way an animal gives birth to a normal offspring. Have you noticed any that were born mutilated” (Al Bukhari and Muslim).<sup>9</sup>

#### 4.3.6 Perceived Behaviour Control/intrinsic factor among Muslim consumers

**Table 4.8: Distribution of responses and mean of perceived behaviour control/intrinsic factor among Muslim consumers**

Item-statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Standard Deviation
I will consume <i>ḥalāl</i> food if the price is low	306 (13.8)	151 (6.8)	224 (10.1)	569 (25.6)	973 (43.8)	3.7881	1.41600
I will consume <i>ḥalāl</i> food if the price is high.	150 (6.7)	177 (8.0)	369 (16.6)	670 (30.1)	857 (38.6)	3.8578	1.20737
I will buy <i>ḥalāl</i> food if it is affordable.	193 (8.7)	81 (3.6)	206 (9.3)	648 (29.1)	1095 (49.3)	4.0666	1.22826
Income can influence my consumption of <i>ḥalāl</i> food.	362 (16.3)	162 (7.3)	238 (10.7)	799 (35.9)	662 (29.8)	3.5565	1.40218
Availability of <i>ḥalāl</i> food products will influence me to consume <i>ḥalāl</i> food.	162 (7.3)	97 (4.4)	199 (9.0)	742 (33.4)	1023 (46.0)	4.0648	1.17326
Easy accessibility of <i>ḥalāl</i> food products will influence me to consume <i>ḥalāl</i> food.	158 (7.1)	92 (4.1)	188 (8.5)	786 (35.4)	999 (44.9)	4.0688	1.15544
I prefer <i>ḥalāl</i> food even if it is scarce.	96 (4.3)	78 (3.5)	204 (9.2)	635 (28.6)	1209 (54.4)	4.2524	1.04950

Table 4.8 depicts the influence of perceived behaviour control/intrinsic factor in the behavioural intention of Muslim consumers in their choice for *halāl* food. The item “I will consume *halāl* food if the price is low” was accepted by 1542 (69.4%) of the respondents resulting from 973 (43.8%) who strongly agreed and 569 (25.6%) who agreed to the statement. They formed the majority and the percentage is considered high. It can be inferred that *halāl* food price is very significant and can influence the choice for *halāl* food of the Muslim consumers.

The statement “I will consume *halāl* food if the price is high” demonstrated that Perceived Behaviour Control has influence on the behaviour of people in their choice for something. It was depicted in the Table that 857 (38.6%) strongly agreed and 670 (30.1%) agreed to the statement. Only 150 (6.7%) strongly disagreed, 177 (8%) disagreed and 369 (16.6%) are neutral to the statement. The percentage of supporters to the statement was 68.7%. This is considered high. Thus, it indicates that Perceived Behaviour Control/ is an influencing determinant in behavioural intention in the choice for the consumption of *halāl* food.

In the Table, it reflects that 1095 (49.3%) and 648 (29.1%) which formed 1743 (78.4%) of the respondents strongly agreed and agreed that affordability of *halāl* food price can make them to buy *halāl* food. This formed the majority of the respondents. Only 193 (8.7%) strongly disagreed and 81 (3.6%) disagreed while 206 (9.3%) respondents were neutral in their responses to the item.

The Table indicates that majority of the respondents (65.7%) agreed that their income can that income can influence their consumption of *halāl* food. A total of 362 (16.3%) strongly disagreed, 162 (7.3%) disagreed and 238 (10.7%) neutral showed that the imams could not influence their behaviours.

Also, 46% and 33.4.0% of the respondents strongly agreed and agreed that availability of *halāl* food products will influence them to consume *halāl* food. This indicates that 79.4% of the respondents which forms the majority of the respondents strongly agreed and agreed to the statement “availability of *halāl* food products will influence me to consume *halāl* food.” Only 7.3% strongly disagreed, 4.4% disagreed and 9% were neutral. It can be inferred that majority of the Muslims in South West, Nigeria can be influenced with availability of *halāl* food.

The result from the responses to the statement “Easy accessibility of *ḥalāl* food products will influence me to consume *ḥalāl* food” demonstrated that Perceived Behaviour Control has influence on the behaviour of people in their choice for something. A total of 999 (49.9%) strongly agreed and 786 (35.4%) agreed to the statement. Only 7.1% strongly disagreed, 4.1% disagreed and 8.5% were neutral to the statement. The percentage of the supporters to the statement was 85.3%. This is considered high. Thus, it indicates that Perceived Behaviour Control is an influencing determinant in behavioural intention and behaviour of consumers on their choice for the consumption of *ḥalāl* food.

The Table indicates that majority of the respondents (83%) strongly agreed (54.4%) and agreed (28.6%) that they will prefer *ḥalāl* food even if it is scarce. It was recorded that only 4.3% strongly disagreed, 3.5% disagreed and 9.2% neutral which showed that scarcity of *ḥalāl* food products can affect them from patronising *ḥalāl* food. In general, many Muslims in the area submitted that even if *ḥalāl* food is scarce, they will still prefer to buy *ḥalāl* food.

It can be concluded from the result as depicted in Table 5.8 that intrinsic factor (a person’s view and state of mind has a vital role in their decision to consume *ḥalāl* food. This assertion is reached because of the high average mean 3.951 recorded from the responses of the participants under this variable.

#### 4.3.7 Muslim consumers' behavioural intention on *halāl* food consumption.

**Table 4.9: Distribution of responses and mean of Muslim consumers' behavioural intention**

Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Standard Deviation
I intend to buy <i>halāl</i> food as a religious obligation	89 (4.0)	48 (2.2)	88 (4.0)	922 (41.5)	1076 (48.4)	4.2812	.94428
I choose to eat <i>halāl</i> food because it is recommended by Allāh	59 (2.7)	56 (2.5)	55 (2.5)	790 (35.5)	1263 (56.8)	4.4134	.87290
I choose to eat <i>halāl</i> food because I consider it safer	52 (2.3)	64 (2.9)	84 (3.8)	953 (42.9)	1070 (48.1)	4.3158	.86338
I choose to eat <i>halāl</i> food because it is considered healthier	50 (2.2)	70 (3.1)	86 (3.9)	931 (41.9)	1086 (48.9)	4.3193882	.86829192
I choose to eat <i>halāl</i> food because it is considered hygienic	46 (2.1)	57 (2.6)	124 (5.6)	969 (43.6)	1027 (46.2)	4.292848	.8491952
I choose to eat <i>halāl</i> food because it has shelf life quality	58 (2.6)	80 (3.6)	178 (8.0)	948 (42.6)	959 (43.1)	4.201080	.9220563
I choose to eat <i>halāl</i> food because it maintains natural taste	61 (2.7)	99 (4.5)	235 (10.6)	872 (39.2)	956 (43.0)	4.1529	.96845

It is shown in the Table that 48.4% strongly agreed and 41.5% agreed to the statement “I intend to buy *ḥalāl* food as a religious obligation.” Only 89 (4%) strongly disagreed, 2.2% disagreed and 4% was neutral. Strongly agreed and agreed formed 1997 (89.9%) of the total respondents. It is considered high. This suggests that majority of the respondents consume *ḥalāl* food because they considered it as a religious obligation. The reaction to the statement “I choose to eat *ḥalāl* food because it is recommended by Allāh” by the participants demonstrated that 1263 (56.8%) strongly agreed and 790 (35.5%) agreed to the statement. Only 2.7% strongly disagreed, 2.5% disagreed and 2.5% was neutral to the statement. The percentage of the supporters to the statement was 2050 (92.3%). This is considered high. Thus, it indicates that majority of the Muslims consumed *ḥalāl* food because Allāh recommends it as a religious fundamental for the Muslims.

Also, 1070 (48.1%) and 953 (42.9%) of the respondents strongly agreed and agreed that they chose to eat *ḥalāl* food because they considered it safer. This indicates that 91% of the respondents which forms the majority of the respondents strongly agreed and agreed to the statement “I choose to eat *ḥalāl* food because I consider it safer.” Only 52 (2.3%) strongly disagreed, 64 (2.9%) disagreed and 84 (3.8%) neutral. It can be inferred that majority of the Muslims in South West Nigeria chose to eat *ḥalāl* food because it is safe.

Those who submitted to the statement “I choose to eat *ḥalāl* food because it is considered healthier were 2017 which formed (90.8%) of the respondents. This means that the Muslims consumed *ḥalāl* food because it is considered healthier. Only 206 (9.2%) of the respondent did not accept the statement.

In the Table, it reflects that 1027 (46.2%) and 969 (43.6%) which formed 89.8% of the respondents strongly agreed and agreed that *ḥalāl* food is considered hygienic. This formed the majority of the respondents. Only 46 (2.1%) strongly disagreed and 57 (2.6%) disagreed while 124 (5.6%) respondents were neutral in their responses to the item. This implies that hygiene is a factor that influences the decision of the majority of the Muslim consumers in consuming *ḥalāl* food.



Majority of the respondents confirmed that *ḥalāl* food has shelf-life quality which stands as a reason for them to have preference for it. A total of 959 (43.1% ) and 958 (42.6%) strongly agreed and agreed respectively to the statement “My family always eats *ḥalāl* food. The percentage (85.7%) is considered high and thus, can be generalised that Muslim consumers in South West, Nigeria eat *ḥalāl* food because it has shelf life quality. Only 14.2% of the respondents did not accept the statement.

Table 4.9 depicts that natural taste of *ḥalāl* food influences the behavioural intention of Muslim consumers in their choice for *ḥalāl* food. The item “I choose to eat *ḥalāl* food because it maintains natural taste” was accepted by 86.2% of the respondents. A total of 956 (43%) strongly agreed and 872 (39.2%) agreed to the statement. They formed the majority with 1828 (82.2%) which is considered high. It can be inferred that the taste of *ḥalāl* food is very significant and influences the choice for *ḥalāl* food.

The Table depicts 4.9 as the mean of the variable- behavioural intention- on the consumption of *ḥalāl* food. This can be interpreted that the Muslim consumers have positive intentions towards *ḥalāl* food consumption as food that possesses good quality, food that is hygienic, tasty, wholesome and religious based.

#### 4.3.8: Religiosity of Muslim consumers' towards behavioural intention

**Table 4.10: Distribution of responses and mean of religiosity of Muslim consumers' behavioural intention**

Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Standard Deviation
Allāh is One	40 (1.8)	6 (.3)	23 (1.0)	429 (19.3)	1725 (77.6)	4.7063	.67859
I pray to only Allāh.	19 (.9)	16 (.7)	30 (1.3)	428 (19.3)	1730 (77.8)	4.7247	.61026
Muhammad (SAW) is the last prophet of Allāh.	28 (1.3)	27 (1.2)	40 (1.8)	434 (19.5)	1694 (76.2)	4.68	.691
Prophet Muhammad is my intercessor on the Day of Resurrection.	24 (1.1)	19 (.9)	45 (2.0)	487 (21.9)	1648 (74.1)	4.6716	.66488
The Day of Judgement is real.	27 (1.2)	14 (.6)	24 (1.1)	455 (20.5)	1703 (76.6)	4.7063	.64247
I always fear the Day of Accountability.	30 (1.3)	17 (.8)	29 (1.3)	516 (23.4)	1631 (73.4)	4.6649	.67598
I believe in destiny	24 (1.1)	9 (.4)	34 (1.5)	554 (24.9)	1602 (72.1)	4.6649	.63831
I take whatever happens to me as my destiny ( <i>al-qadar</i> ).	32 (1.4)	21 (.9)	29 (1.3)	636 (28.6)	1505 (67.7)	4.6019	.70381
Quran is the last holy Book revealed by Allāh.	47 (2.1)	15 (.7)	40 (1.8)	462 (20.8)	1659 (74.6)	4.6514	.74667
I read the Holy Qur'an always.	28 (1.3)	65 (2.9)	185 (8.3)	769 (35.8)	1149 (51.7)	4.3374	.84670
I believe Man (I am) is created mainly to worship Allāh.	39 (1.8)	15 (.7)	37 (1.7)	527 (23.7)	1605 (72.2)	4.6392	.71774
I give out charity more in the months of Ramadan.	32 (1.4)	43 (1.9)	144 (6.5)	850 (38.2)	1154 (51.9)	4.3725	.80770
I attend <i>da'wah</i> programmes always.	26 (1.2)	77 (3.5)	280 (12.6)	941 (42.3)	899 (40.4)	4.1741	.86267
I try to stick to <i>Sharī'ah</i> in all my undertakings.	20 (.9)	55 (2.5)	184 (8.3)	927 (41.7)	1037 (46.6)	4.3072	.79692

In the Table, it is presented that 1725 (77.6%) and 429 (19.3%) which indicates 2154 (96.9%) of the respondents strongly agreed and agreed that they believed that Allāh is One. This formed the majority of the respondents. Only 40 (1.8%) strongly disagreed and 6 (0.3%) disagreed while 23 (1%) of the respondents were neutral in their responses to the item statement “Allāh is One.” This implies that majority of the Muslim consumers believed that Allāh is One. It indicates that the Muslims in South West, Nigeria were highly religious.

The Table exhibited that majority of the respondents 2158 (97.1%) accepted the statement “I pray to only Allāh.” 1730 (77.8%) strongly agreed and 428 (19.3%) agreed to the statement. 65 (2.9%) strongly disagreed, disagreed and neutral. The result shows that Muslim do not pray to other things except to Allāh.

Also, 76.2.0% and 19.5% of the respondents strongly agreed and agreed that Muhammad (PBUH) is the last prophet of Allāh. This indicates that 95.7% of the respondents which forms the majority of the respondents strongly agreed and agreed to the statement. Only 24% strongly disagreed, disagreed and stood neutral. It can be inferred that majority of the Muslims in South West Nigeria are deep in their belief in the prophet-hood of Prophet Muhammad which indicates a high degree of their religiosity.

It is reflected in the Table that 74.1% and 21.9% of the respondents strongly agreed and agreed to the statement that “Prophet Muhammad is my intercessor on the Day of Resurrection”. This indicates that 96% of the respondents which forms the majority of the respondents strongly agreed and agreed to the statement. It can be inferred that majority of the Muslims in South West Nigeria are deep in their belief in the prophet-hood of Prophet Muhammad and his intercession in the Day of Resurrection which indicates a high level of their religiosity.

The Table depicts that the Muslims in South West, Nigeria believed that The Day of Judgement is real as 2158 (97.1%) of the respondents supported the statement. 1703 (76.6%) strongly agreed and 455(20.5%) agreed to the statement. Only 65 (2.9%) which was a minority of the respondents indicated that they did not believe in the concept of the Day of Judgement as a reality or realisable. It can thus, be generalised that most Muslims in South West have strong belief in the Day of Resurrection. This

reveals their deep faith in the principles of Islām and the articles of Islāmic faith (*Imān*).

The statement “I always fear the Day of Accountability” was supported by 73.4% strongly agreed and 23.4% agreed of the respondents. Only 1.3% strongly disagreed, 0.8% disagreed and 1.3% was neutral to the statement. The percentage for supporters to the statement was 96.8%. This is considered high. Thus, it indicates that majority of the Muslims in South West Nigeria reckoned with the Day of Accountability and they fear it always. This proved their sincere belief in the Day of Resurrection because it is the Day of accountability where and when every human being will give clear and detailed account of all his deeds on earth before the Divine Judge- Allāh and he shall be judged.

In the Table, it reflects that 72.1% and 24.9% which formed 2156 (97%) of the respondents strongly agreed and agreed to the statement “I believe in destiny.” This formed the majority of the respondents. Only 1.1% strongly disagreed and 0.4% disagreed while 1.5% respondents were neutral in their responses to the statement.

The Table indicates that majority of the respondents 2141 (96.3%) strongly agreed 1505 (67.7%) and agreed 630 (28.6%) that whatever happens to any of them is his/her destiny (*al-qadar*). Only 32 (1.4%) strongly disagreed, 21 (.9%) disagreed and 29 (1.3%) neutral to the statement “I take whatever happens to me as my destiny (*al-qadar*).” In general, many Muslims in the area submitted that whatever happens to any of them is his/her destiny (*al-qadar*). This substantiated their strong belief as Muslims in the destiny as an article of imān in Islam.

The item “Qur’an is the last holy Book revealed by Allāh” was accepted by 2121 (95.4%) of the respondents recorded from 1659 (74.6%) strongly agreed and 462 (20.8%) agreed. They formed the majority and the percentage is considered high. It can be inferred that the Muslims accepted that all Allāh’s messages in the original Revealed Books before Qur’an was revealed are contained in the Qur’an. Thus, they do not need to take from any other Book(s) except from the Qur’an.

The statement “I read the Holy Qur’an always” recorded 51.7% strongly agreed and 35.8% agreed. Only 1.3% strongly disagreed, 2.9% disagreed and 8.3% was neutral to

the item. The percentage of the supporters to the statement was 87.5%. This is considered high. Thus, it indicates that the Muslims are conversant with the reading of the Qur'an, the holy Book of their religion and thus, were familiar with its teachings and messages. This suggested a reflection of high degree of religiosity and/or devotion to their religion- Islām. In the Table, it reflects that 72.2% and 23.7% which formed 95.9% of the respondents strongly agreed and agreed that they believed that Man (I am) is created mainly to worship Allāh. This formed the majority of the respondents. Only 1.8% strongly disagreed and .Only 7% disagreed while 1.7% of the respondents was neutral in their responses to the item. This implies that majority of the Muslim consumers in South West, Nigeria submitted to the sovereignty of Allāh only who is deserved to be worshipped and that the main purpose for creation is to worship the Creator- Allāh.

The result to the item statement "I give out charity more in the months of Ramadan" shows that they understood the essence of Ramadan fast and they observed it in line with the teaching of the Prophet and his practice in the month of Ramadan. The Table shows that 2004 (90.1%) gave a positive reaction to the statement as 1154 (51.9%) strongly agreed and 850 (38.2%) agreed. This depicts a high level of their adherence to the tenets of their religion- Islām. Only 114 (6.5%) were neutral, 43 (1.9%) disagreed and 32 (1.4%) strongly disagreed.

The Table indicates that majority of the respondents 1840 (82.7%) supported the item "I attend *da'wah* programmes always." Only 26 (1.2%) strongly disagreed, 77 (3.5%) disagreed and 280 (12.6%) were neutral. This revealed that majority of the Muslims in the area always attended *da'wah* programmes. It suggests that they took the religious activities very seriously.

Exploring the level of religiosity of the Muslim consumers of *halāl* food in South West, Nigeria, 1037 (46.6%) and 927 (41.7%) of the respondents strongly agreed and agreed that they tried to stick to *Shari'ah* in all their undertakings. This indicates that 83.8% of the respondents which forms the majority of the respondents strongly agreed and agreed to the statement." Only 20 (0.9%) strongly disagreed, 55 (2.5%) disagreed and 184 (8.3%) neutral. It can be inferred that majority of the Muslims in South West Nigeria were *Shari'ah* compliant in their undertakings.

The average mean score of religiosity of Muslim consumers' behavioural intention is 4.565. This suggests that the Muslims in South West Nigeria are adherently religious.

#### 4.3.9: Perception of consumers of *halal* certification

**Table 4.11: Distribution of responses and mean of perception of consumers of *halāl* certification**

Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Standard Deviation
<i>Halāl</i> certification/logo signifies that the food is prepared strictly in compliance with <i>Sharī'ah</i> .	72 (3.2)	73 (3.3)	147 (6.6)	1067 (48.0)	864 (38.9)	4.1597	.92332
Genuine <i>halāl</i> food logo reduces food scandal and fraud.	43 (1.9)	130 (5.8)	207 (9.3)	1052 (47.3)	791 (35.6)	4.0877	.92176
<i>Halāl</i> food certificate guarantees food safety.	54 (2.4)	88 (4.0)	174 (7.8)	1044 (47.0)	863 (38.8)	4.1579	.90493
<i>Halāl</i> food certificate guarantees healthy food.	54 (2.4)	91 (4.1)	156 (7.0)	1037 (46.6)	885 (39.8)	4.1732	.90611
<i>Halāl</i> food certificate guarantees food quality.	45 (2.0)	100 (4.5)	174 (7.8)	1054 (47.4)	850 (38.3)	4.1534	.89420
Establishment of government <i>halāl</i> certification agencies would influence people to consume <i>halāl</i> food.	53 (2.4)	68 (3.1)	185 (8.3)	999 (44.9)	918 (41.3)	4.1970	.89143
Inclusion/Provision of <i>halāl</i> food Act in the rules and regulations of NAFDAC will stimulate the consumption of <i>halāl</i> food.	45 (2.0)	62 (2.8)	126 (5.7)	993 (44.7)	997 (44.8)	4.2753	.85056

The statement “*Ḥalāl* certification/logo signifies that the food is prepared strictly in compliance with *Sharī‘ah*.” was supported by 864 (38.9%) strongly agreed and 1067 (48%) agreed of the respondents. It reflects in the Table that 72 (3.2%) strongly disagreed, 73 (3.3%) disagreed and 147 (6.6%) are neutral to the statement. The percentage for supporters to the statement was 86.9%. This is considered high. Thus, it indicates that majority of the Muslims in South, West Nigeria reckoned with *halāl* certification/logo in choosing to buy *halāl* food product.

In the Table, it reflects that 791 (35.6%) and 1052 (49.3%) which formed 86% of the respondents strongly agreed and agreed to the statement “Genuine *halāl* food logo reduces food scandal and fraud.” This formed the majority of the respondents. As exhibited in the Table, 1.9% strongly disagreed and 5.8% disagreed while 9.3% respondents were neutral in their responses to the statement. Thus, majority of the Muslim consumers accepted that genuine *halāl* logo can reduce food scandals and fraud and thus rested on the certification and logos in taking decision to purchase *halāl* food.

The Table also indicates that majority of the respondents (86.6%) agreed that *halāl* food certificate guarantees food safety. In general, the Muslims in the area believed that *halāl* food certificate guarantees food safety. This is because food is prepared under strict observance of *Ḥalāl* Hazard Analysis Critical Control Points (HHACCPs), which is Shariah based, in the stages of production to avoid cross contamination with both non *halāl* and poisonous substances. They rest on certification for the safety of *halāl* food and thus patronise it.

The item *halāl* food certificate guarantees healthy food” was accepted by 86.4% of the respondents as depicted in Table 5.3.9 that 39.8% strongly agreed and 46.6% agreed. They formed the majority and the percentage is considered high. It can be inferred that the Muslims accepted the statement. Only 2.4% strongly disagreed, 4.1% disagreed and 7% was neutral to the item. Thus, it indicates that Muslims majority saw *halāl* certification as a measure that can ensure production of healthy food and channeled their intention to consume it.



In the Table, it reflects that 38.2% and 47.4% which formed 85.6% of the respondents strongly agreed and agreed that they believed that *ḥalāl* food certificate guarantees food quality. The percentage formed the majority of the respondents. Only 2% strongly disagreed and 4.5% disagreed while 7.8% respondents was neutral in their responses to the item. This implies that majority of the Muslim consumers in South West Nigeria submitted that *ḥalāl* food certificate guarantees food quality. This suggests that quality of *ḥalāl* food guarantees by the certification influenced their intention for purchasing ḥalāl food.

The result to the item statement “establishment of government *ḥalāl* certification agencies would influence people to consume *ḥalāl* food” shows that 41.3% strongly agreed and 44.9% agreed. This depicted that they can rely better on *ḥalāl* food certification that is established and controlled by the government. Only 8.3% was neutral, 3.1% disagreed and 2.4% strongly disagreed.

The Table indicates that majority of the respondents (89.5%) strongly agreed (44.8%) and agreed (44.7%) that “inclusion/provision of *ḥalāl* food Act in the rules and regulations of NAFDAC will stimulate the consumption of *ḥalāl* food.” Only 2% strongly disagreed, 2.8% disagreed and 5.7% neutral. This reveals that majority of the Muslims in South West, Nigeria, believed that the inclusion will add more integrity to *ḥalāl* food products and the operation of *ḥalāl* food production and can be concluded that this can influence their intention towards *ḥalāl* food consumption.

The mean score for certification construct is 4.172. Thus, it can be submitted that certification of *ḥalāl* food will have significant impacts on *ḥalāl* food status as it is perceived important by the Muslim consumers in South West, Nigeria.

#### 4.3.10 Perception of Muslim consumers towards *halāl* food logistics

**Table 4.12: Distribution of responses and mean of perception of Muslim consumers on *halāl* food logistics**

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Standard Deviation
Separation of <i>halāl</i> food from non <i>halāl</i> food during conveyance would increase consumers' trust in <i>halāl</i> food products.	71 (3.2)	62 (2.8)	133 (6.0)	996 (44.8)	961 (43.2)	4.2209	.91800
Separation of <i>halāl</i> food from non <i>halāl</i> food would preserve <i>halāl</i> food from cross-contamination.	51 (2.3)	85 (3.8)	146 (6.6)	1006 (45.3)	935 (42.1)	4.2096	.89561
Segregation of <i>halāl</i> food from non <i>halāl</i> food would remove doubt of <i>halāl</i> food originality.	38 (1.7)	75 (3.4)	166 (7.5)	979 (44.0)	965 (43.4)	4.2407	.86022
I will not buy <i>halāl</i> food products produced by any company that processes non- <i>halāl</i> food in the same premises.	102 (4.6)	136 (6.1)	310 (13.9)	895 (40.3)	780 (35.1)	3.9514	1.07059
I will buy <i>halāl</i> food products that are packaged with non <i>halāl</i> foods whose materials do not leak.	262 (11.7)	332 (14.9)	291 (13.1)	777 (35.0)	560 (25.2)	3.4764	1.34447
I will buy <i>halāl</i> foods that are labeled with a widely accepted	48 (2.2)	75 (3.4)	155 (7.0)	973 (43.8)	972 (43.7)	4.2353	.88389

and approved logo.							
Designing a unique government <i>ḥalāl</i> logo would influence <i>ḥalāl</i> consumption	54 (2.4)	75 (3.4)	152 (6.8)	1016 (45.7)	926 (41.7)	4.207 8	.89200
Provision/approval of <i>ḥalāl</i> food kiosks for <i>ḥalāl</i> food products by the government will influence people to consume <i>ḥalāl</i> food.	71 (3.2)	70 (3.1)	138 (6.2)	959 (43.1)	985 (44.3)	4.222 2	.93252

The Table displays that 43.2.0% strongly agreed and 44.8% agreed to the statement “Separation of *ḥalāl* food from non-*ḥalāl* food during conveyance would increase consumers’ trust in *ḥalāl* food products.” Only 3.2% strongly disagreed, 2.8% disagreed and 6% neutral. Strongly agreed and agreed formed 88% of the total respondents. It is considered high. This suggests that majority of respondents viewed it reasonable that *ḥalāl* food should be separately transported during distribution to the warehouses, dealers, wholesalers and/or retailers. It was perceived that if *ḥalāl* and non *ḥalāl* products are not packed together in the same containers and same vehicles, it will increase the confidence of the Muslim consumers on the status of *ḥalāl* food products.

The responses to the statement “separation of *ḥalāl* food from non *ḥalāl* food would preserve *ḥalāl* food from cross-contamination.” demonstrated that 42.1% strongly agreed and 45.3% agreed to the statement. Only 2.3% strongly disagreed, 3.8% disagreed and 6.6% are neutral to the statement. The percentage of the supporters to the statement was 87.4%. This is considered high. Thus, it indicates that majority of the respondents have a right perception towards separation of *ḥalāl* food from non *ḥalāl* food. They accepted that *ḥalāl* food should be packed separately to avoid cross contamination with non *ḥalāl* substances.

Also, 43.4% and 44% of the respondents agreed and strongly agreed that segregation of *ḥalāl* food from non *ḥalāl* food would remove doubt of *ḥalāl* food originality. This indicates that 87.4% of the respondents which forms the majority of the respondents strongly agreed and agreed to the statement “Segregation of *ḥalāl* food from non *ḥalāl* food would remove doubt on the originality of the *ḥalāl* food.” Only 1.7% strongly disagreed, 3.4% disagreed and 7.5% was neutral. It can be inferred that majority of the Muslims in South West, Nigeria saw separation of *ḥalāl* food from non *ḥalāl* food as a factor that support the originality of *ḥalāl* food status.

Those who submitted to the statement “I will not buy *ḥalāl* food products produced by any company that processes non-*ḥalāl* food in the same premises” formed 75.4% of the respondents. Only 24.6% of the respondents did not accept the statement. This implied that such company may not give *ḥalāl* consideration for *ḥalāl* products as

such. This is likely to imprint some elements of distrust on the *ḥalāl* status of *ḥalāl* food products of such company.

In the Table, it reflects that 25.2% and 35% which formed 60.2% of the respondents strongly agreed and agreed that they will buy *ḥalāl* food products that are packaged with non *ḥalāl* foods whose materials do not leak. Only 11.7% strongly disagreed and 14.9% disagreed while 13.1% respondents were neutral in their responses to the item. This implies that if materials used to pack non *ḥalāl* food products with which *ḥalāl* food products are packed together do not and cannot leak, though, the status of the *ḥalāl*ness of the *ḥalāl* products is still reliable, many Muslims would be reluctant to purchase them.

Majority of the respondents confirmed that they chose to purchase *ḥalāl* food that is labeled with a widely accepted and approved logo. From the Table 43.7% and 43.8% strongly agreed and agreed respectively to the statement “I will buy *ḥalāl* foods that are labeled with widely accepted and approved *ḥalāl* logos.” This formed 87.5% and considered high. Thus, it can be generalised that a widely accepted *ḥalāl* food logos can positively influence the intention of Muslim consumers in purchasing *ḥalāl* food.

The item “Designing a unique government *ḥalāl* logo would influence *ḥalāl* consumption” was accepted by 86.2% of the respondents. It reflects from the Table that 41.7% strongly agreed and 45.7% agreed to the statement. They formed the majority and the percentage (87.4%) is considered high. It can be inferred that with government involvement in the supervision of *ḥalāl* food certification, *ḥalāl* food status and integrity will be enhanced. This suggests that the government logo would influence the Muslims to have a strong taste for *ḥalāl* food.

Investigating the level of perception of Muslim consumers on *ḥalāl* food logistics 44.3% and 43.1% of the respondents agreed and strongly agreed that provision or approval of *ḥalāl* food kiosks for *ḥalāl* food products by the government will influence people to consume *ḥalāl* food. This indicates that 87.4% of the respondents which forms the majority of the respondents strongly agreed and agreed to the statement.” Only 3.2% strongly disagreed, 3.1% disagreed and 6.2% neutral. It can be inferred that majority of the Muslims in South West Nigeria accepted that *ḥalāl* food kiosks

particularly government *ḥalāl* food kiosks would influence people to patronise *ḥalāl* food.

With the high positive perception of Muslim consumers towards *ḥalāl* food logistics, it reflects that logistics is very important in the administration of *ḥalāl* food to enable *ḥalāl* food to maintain its originality and integrity. This submission is arrived at from the average mean of 4.096 score recorded from the responses of the participants which is considered good and high.

#### 4.3.11: Knowledge of Muslim consumers of *ḥalāl* terms

**Table 4.13: Distribution of responses and mean of knowledge of Muslim consumers of *ḥalāl* terms**

I have knowledge of the following Arabic terms on *ḥalāl* food:

Item	Yes	No	Mean	Standard Deviation
<i>Ḥalāl</i>	2150 (96.7)	73 (3.3)	1.0328	.17825
<i>Ḥarām</i>	2052 (92.3)	171 (7.7)	1.0769	.26653
<i>Sunnah</i>	2106 (94.7)	117 (5.3)	1.0526	.22335
<i>Mustahābb</i>	1474 (66.3)	749 (33.7)	1.3369	.47277
<i>Makrūh</i>	1315 (59.2)	908 (40.8)	1.4085	.49166
<i>Shubhaat</i>	1213 (54.6)	1010 (45.4)	1.4543	.49802
<i>Ṭayyib</i>	1515 (68.2)	708 (31.8)	1.3185	.46599
<i>Halālan Ṭayyiban</i>	1450 (65.2)	773 (34.8)	1.3477	.47636
<i>Al-khabīthat/a-khabāith</i>	1081 (48.6)	1142 (51.4)	1.5137	.49992
<i>Dhibh</i>	958 (43.1)	1265 (56.9)	1.5691	.49532
<i>Dhabīhah</i>	982 (44.2)	1241 (55.8)	1.5583	.49671
<i>Maytah</i>	1260 (56.7)	963 (43.3)	1.4332	.49563
<i>Al-damm</i>	987 (44.4)	1236 (55.6)	1.5560	.49697
<i>Khinzīr</i>	997 (44.8)	1226 (55.2)	1.5515	.49745
<i>Al-khamr</i>	1108 (49.5)	1115 (50.2)	1.5016	.50011
<i>Bahīmah al-an'ām</i>	1000 (45.0)	1223 (55.0)	1.5502	.49759

Majority of the respondents did not understand many Arabic terms related to *ḥalāl* food consumption. Out of sixteen (16) *ḥalāl* terms, only *ḥalāl*, *ḥarām* and *Sunnah* were understood by majority of the respondents as the three terms recorded 96.7%, 92.3% and 94.7% respectively. The mean, which is 1.391, indicates that many of the Muslim consumers have a low knowledge of *ḥalāl* food Arabic terms.



**Table 4.14 Pearson correlation analysis of each of the independent variables (awareness of *halāl* food (AHF); knowledge of *halāl* food (KHF); attitude towards *halāl* food (ATHF); subjective norms (SN); perceived behavioural control (PBC); behavioural intention (BI); religiosity (REL.); perception of *halāl* certification (PHC) and perception of *halāl* logistics (PHL) on perception of *halāl* food (PHF) of the Muslim consumers**

	Mea n	StD	PH F	AH F	KH F	ATH F	SN	PB C	BI	RE L	PH C	PH L
PHF	37.9 7	6.4 5	1.0									
AHF	47.7 5	7.8 4	.55 6	1.0								
KHF	49.8 9	7.7 8	.57 1	.559	1.0							
ATH F	42.1 1	6.9 9	.60 1	.495	.639	1.0						
SN	25.2 0	4.9 1	.48 2	.376	.489	.659	1.0					
PBC	27.6 5	6.4 1	.41 7	.353	.414	.476	.44 8	1.0				
BI	29.9 7	5.2 8	.62 6	.420	.571	.682	.58 6	.52 6	1.0			
REL	63.9 0	7.6 6	.45 3	.422	.543	.566	.48 0	.35 9	.59 4	1.0		
PHC	29.2 0	5.1 9	.53 8	.384	.532	.634	.55 4	.43 7	.65 0	.54 6	1.0	
PHL	32.7 6	5.5 1	.51 5	.421	.568	.589	.51 7	.40 7	.58 6	.52 5	.721	1.0

**Dependent Variable: Perception**

All the independent variables except *ḥalāl* term are significant in their relationship with the dependent variable (perception of *ḥalāl* food) among the Muslim consumers' participants: Awareness of *ḥalāl* food ( $r = .556$ ,  $p < 0.05$ ); knowledge of *ḥalāl* food ( $r = .571$ ,  $p < 0.05$ ); attitude ( $r = .601$ ,  $p < 0.05$ ); subjective norms ( $r = .482$ ,  $p < 0.05$ ); perceived behavioural control ( $r = .417$ ,  $p < 0.05$ ); behavioural intention ( $r = .626$ ,  $p < 0.05$ ); religiosity ( $r = .453$ ,  $p < 0.05$ ); perception of *ḥalāl* food certification ( $r = .538$ ,  $p < 0.05$ ) and perception of *ḥalāl* logistics ( $r = .515$ ,  $p < 0.05$ ). Awareness of *ḥalāl* food is found, in this study, to have a positive significant effect on Muslim consumers' perception in consuming *ḥalāl* food. Similar result was found by some previous researchers such as Aslan, 2016. This means that the result of this work corroborates their findings. Knowledge of a concept or phenomenon determines a person's perception of such concept. In this study, it reflects that the knowledge of *ḥalāl* food possessed by the Muslim consumers aided their perception of *ḥalāl* food. Knowledge of Islamic tenets is crucial in the practice of the religion. The holy Prophet Muhammad (PBUH) said: "Anyone who Allah wishes good, He would give him a good understanding of the knowledge of the religion". Therefore, the reflection of the knowledge received by the Muslim consumers from the various Islamic programmes and Friday *khutbāt* (sermons) is their positive perception towards *ḥalāl* food. This result is similar to the finding of Said, et al (2014) that the level of knowledge possessed by Muslim consumers affects their perception of *ḥalāl* food. They also submitted in their assessment of consumers' perception, knowledge and religiosity on Malaysia's *ḥalāl* food products that religiosity is a vital tool in determining the perception of *ḥalāl* food by Muslim consumers. Family members, imams, teachers, friends and co-workers are established in the Theory of Planned Behavior as influencers on a person's behaviour. The result of this study corroborates the theory. In the same vein the result is in line with the findings of Bonne, et al (2007) in their research on determinants of *ḥalāl* meat consumption in France which reveals that influence of peer group predicts their perception and consumption of *ḥalāl* meat.

However, subjective norms is found to be negatively significant, contrary to the finding of this study, in a research carried out by Abdul Khalek (2014) in studying the attitude of young consumers towards *ḥalāl* food outlets and JAKIM's *ḥalāl* certification in Malaysia. She submitted that this negative influence of the subjective norms might be that the young consumers have the tendency to decide on their own

independently without any external influences. The financial capacity, taste and choice for quality food do affect a person's perception of such food. It is propounded by Icek Ajzen that perceived behavioural control as an intrinsic factor usually has an influence on the perception of a person. The study also reveals that perceived behavioural control shows a positive effect on the perception of the Muslim consumers of *ḥalāl* food. This result supports the finding of Aslan (2016) in his research carried out to measure *ḥalāl* awareness at Bingol City.

Aslan also established that certification had a positive correlation on the perception of consumers of *ḥalāl* food. He submitted that *ḥalāl* logistics stands as an influencer on the perception of consumers towards *ḥalāl* food. Behavioural intention is considered a strong factor of shaping human perception, attitude and behaviour in day-to-day activities. And based on intention every human action is judged by Allah. Significance of intention is reiterated by Allah in the Glorious Qur'an and emphasised by Prophet Muhammad (PBUH). Allah says:

“Say (O Muhammad): Verily I am commanded to worship Allah (alone) by obeying Him and doing religious deeds sincerely for His sake only.”

This emphasises sincerity of intention. With a make-up intention, one's perception towards any situation, practice or concept is influenced. Once a worshipper takes a religious tenet as an obligation, and intends to observe this tenet fundamentally, his perception towards it will be greatly influenced compared with someone who does not attach much concern to such tenet. Holy Prophet Muhammad directed the attention of the Muslim ummah to the significance of intention towards their religious obligations stressing that individual's actions are carried out based on his intention and hence, the action is judged by that intention as he said:

“Actions are but judged by intentions and every man shall have only that which he intended....” Al-Bukhari and Muslim.

This implies that for every action man makes, there is an intention behind it. This intention will now shape his action towards achieving it or enforcing action to pursue

it. The intention to consume *ḥalāl* food makes a Muslim consumer develop a positive perception of it.

Thus, the result of this study confirms the *ḥadīth* of the Prophet as the behavioural intention shows a significant positive influence on the perception of Muslim consumers towards their consumption of *halal* food.

#### 4.3. 13 Research Question One

To what extent can awareness, knowledge of *ḥalāl* food, attitude, subjective norms, perceived behavioural control, behavioural intention and religiosity, perception of *ḥalāl* certification and logistics possessed by Muslim consumers influence their perception of *ḥalāl food*?

**Table 4.15: Multiple regression analysis on joint contributions of variables on Muslim consumers' perception of *ḥalāl* food**

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Multiple R = .730  
 Multiple R<sup>2</sup> = .533  
 Multiple R<sup>2</sup> (Adjusted) = .531  
 Standard Error of Estimate = 4.42116

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Source of Variance	Sum of Square	Df	Mean Square	F-Ratio	P
Regression	49313.364	9	5479.263	280.317	<0.05
Residual	43256.725	2213	19.547		
Total	92570.089	2222			

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**Dependent Variable: Perception**

Table above shows that there was joint effect of the independent variables (awareness of *halāl* food (AHF); knowledge of *halāl* food (KHF); attitude towards *halāl* food (ATHF); subjective norms (SN); perceived behavioural control (PBC); behavioural intention (BI); religiosity (REL.); perception of *halāl* certification (PHC) and perception of *halāl* logistics (PHL) and perception of *halāl* food (PHF) of the Muslim consumers in the study area ( $R = 0.730$ ,  $p < .05$ ). The combination of the independent variables accounted for 53.1% (adjusted  $R^2 = 0.531$ ) of the total variance in the prediction towards perception of *halāl* food (PHF) of the Muslim consumers. The analysis of variance of the multiple regression data yielded an F-ratio value which was found to be significant at 0.05 Alpha level ( $F = 280.317$ ,  $P < 0.05$ ). This shows that the independent variables jointly contributed to perception of *halāl* food (PHF) of the Muslim consumers. This answered research question 1 and thus, achieved the first objective.

**Table 4.16: Multiple regression analysis of each of the independent variables (awareness of *halāl* food (AHF); knowledge of *halāl* food (KHF); attitude towards *halāl* food (ATHF); subjective norms (SN); perceived behavioural control (PBC); behavioural intention (BI); religiosity (REL.); perception of *halāl* certification (PHC) and perception of *halāl* logistics (PHL) for the predictions on perception of *halāl* food (PHF) of the Muslim consumers**

	Unstandardised Coefficient		Standardised Coefficient	T	Sig.	Remark
	B	Std Error	Beta			
(Constant)	4.093	.844		4.847	.000	Sig.
AHF	.215	.015	.262	14.408	.000	Sig.
KHF	.101	.018	.122	5.676	.000	Sig.
ATHF	.115	.023	.124	5.066	.000	Sig.
SN	.023	.027	.018	.862	.389	Not Sig.
PBC	.018	.018	.018	1.010	.313	Not Sig.
BI	.360	.029	.294	12.577	.000	Sig.
REL	-.042	.017	.050	-2.523	.012	Sig.
PHC	.105	.029	.084	3.546	.000	Sig.
PHL	.045	.026	.039	1.721	.085	Not Sig.

**Dependent Variable: Perception**

Among the nine independent variables employed for the prediction of Muslim consumers' perception towards the consumption of *halāl* food, only subjective norms, perceived behavioural control and *halāl* logistics did not have significant contributions to their perception of the consumption of *halāl* food. In terms of magnitude of the contribution: behavioural intention was the most potent contributor towards the perception of *halāl* food (PHF) of the Muslim consumers ( $\beta = .294$ ,  $t = 12.577$ ,  $p < 0.05$ ), this was followed by awareness ( $\beta = .262$ ,  $t = 14.408$ ,  $p < 0.05$ ), attitude ( $\beta = .124$ ,  $t = 5.066$ ,  $p < 0.05$ ), knowledge of *halāl* food ( $\beta = .122$ ,  $t = 5.676$ ,  $p < 0.05$ ), certification ( $\beta = .084$ ,  $t = 3.546$ ,  $p < 0.05$ ) followed by religiosity ( $\beta = 0.050$ ,  $t = -2.523$ ,  $p < 0.05$ ) positively contributed to the Muslim consumers' perception of *halāl* food consumption. Thus, the null hypothesis is significantly rejected.

**Table 4.17: T.Test Table showing the extent of effect of demographic factor (gender) of the Muslim consumers, primary and processed food workers on awareness, knowledge and perception of *halāl* food**

	Gender	N	$\bar{X}$	Std.	Df	T	Sig.
<b>Muslim consumers</b>							
AKP	Male	1025	138.48	17.641	288	-1.118	.264
	Female	1197	133.18	19.054			
<b>Primary food workers</b>							
AKP	Male	130	105.2923	15.62419	288	-1.118	.264
	Female	160	107.1000	11.88953			
<b>Processed food workers</b>							
AKP	Male	76	128.5000	11.28716	173	3.024	.003
	Female	99	122.4747	14.27810			



The result from the Table reveals that there was significant relationship between gender and awareness, knowledge and perception of Muslim consumers of *ḥalāl* food in the study area ( $t(2220) = 6.765, p < 0.05$ ). Male ( $\bar{X} = 138.48, SD = 17.641$ ) more than female ( $\bar{X} = 133.18, SD = 19.054$ ).

It is depicted from the result in the Table above that gender had no significant effect on the awareness, knowledge and perception of primary food workers of *ḥalāl* food ( $t(288) = -1.118, p > 0.05$ ). Male ( $\bar{X} = 105.2923, SD = 15.62419$ ) and female ( $\bar{X} = 107.1000, SD = 11.88953$ ).

The result from the Table reveals that there was significant relationship between gender and awareness, knowledge and perception of processed food workers of *ḥalāl* food in the study area ( $t(173) = 3.024, p < 0.05$ ). Female ( $X = 122.4747, SD = 14.27810$ ) more than male ( $X = 128.5000, SD = 11.28716$ ).

**Table 4.18: ANOVA Table showing the extent of effect of demographic factors on Muslim consumers' awareness, knowledge and perception of the consumption of *halāl* food**

		Sum of Square	Df	Mean Square	F	Sig.
Ethnicity* awareness, knowledge and perception	Between Groups	7215.215	3	2405.072	7.011	.000
	Within Groups	761208.125	2219	343.041		
	Total	768423.340	2222			
Age* awareness, knowledge and perception	Between Groups	10725.233	8	1340.654	3.917	.001
	Within Groups	757698.106	2214	342.230		
	Total	768423.340	2222			
Occupation* awareness, knowledge and perception	Between Groups	9819.281	3	3273.094	9.574	.000
	Within Groups	758604.059	2219	341.868		
	Total	768423.340	2222			
Level of education* awareness, knowledge and perception	Between Groups	744957.187	6	3911.025	11.634	.000
	Within Groups	758423.133	2216	336..172		
	Total	768423.340	2222			
State* Awareness, knowledge and perception	Between Groups	8028.810	5	1605.762	4.682	.000
	Within Groups	760394.530	2217	342.984		
	Total	768423.340	2222			

Result from Table 4.18 shows the extent of the influence of demographic factors on Muslim consumers' awareness, knowledge and perception of the consumption of *ḥalāl* food. The result reveals that there was significant influence of ethnicity on awareness, knowledge and perception of ḥalāl food ( $F(3,2219) = 7.011, P < 0.05$ ), age also had significant influence ( $F(8,2214) = 3.917, P < 0.05$ ), occupation was also significant ( $F(3,2219) = 9.574, P < 0.05$ ), education was also significant ( $F(6,2216) = 11.634, P < 0.05$ ) and state of residence ( $F(5,2217) = 4.682, P < 0.05$ ). It could be concluded that the extent to which demographic factors affect Muslim consumers' awareness, knowledge and perception of the consumption of *ḥalāl* food is to a great extent. This result corroborates the finding of Kurtoglu and Cicek (2013) from their study "A Research to Determine Consumers' Perception, Attitudes and Expectations Towards *Ḥalāl* Products. The research affirms that demographic factors such as gender, age, educational background and occupation have influential roles on *ḥalāl* food awareness.<sup>10</sup> Also, Ruslan et.al (2018) asserted that gender, age, education level and occupation had significant relationships with awareness of *ḥalāl* food fraud.<sup>11</sup>

**Table 4.19: ANOVA Table showing the influence of planned behaviour (attitude, subjective norms- intrinsic factors and perceived behavioural control- extrinsic factor); religiosity; certification; and logistics on the behavioural intention of Muslim consumers towards the patronage of *halāl* food**

		Sum of Square	Df	Mean Square	F	Sig.
Attitude* behavioural intention	Between Groups	31031.776	39			
	Within Groups	30933.007	2183			
	Total	61964.784	2222			
Subjective norms* behavioural intention	Between Groups	22858.533	24			
	Within Groups	39096.251	2198			
	Total	61964.784	2222			
Perceived behavioral control* behavioural intention	Between Groups	19884.819	28	710.172	37.028	
	Within Groups	42079.965	2194	19.180		
	Total	61964.784	2222			
Religiosity* behavioural intention	Between Groups	23213.586	47	493.906	27.726	
	Within Groups	38751.197	2175	17.817		
	Total	61964.784	2222			
Certification* behavioural intention	Between Groups	28548.663	28	1019595	66.943	.000
	Within Groups	33416.121	2194	15.231		
	Total	61964.784	2222			
Logistics* behavioural intention	Between Groups	23300.955	32	728	41.244	.000
	Within Groups	38663.829	2190	17.6551		
	Total	61964.784	2222			

Result from the Table 4.19 shows the influence of perceived behaviour (attitude, subjective norms- intrinsic factor and perceived behavioural control- extrinsic factor) and religiosity on the behavioural intention of Muslim consumers towards the patronage of *halāl* food. The result reveals that there was significant influence of attitude and behavioural intention ( $F(39,2183) = 56.153, P < 0.05$ ), also between subjective norm and behavioural intention ( $F(24,2198) = 53.570, P < 0.05$ ), perceived behaviour and behavioural intention ( $F(24,2198) = 37.028, P < 0.05$ ) and religiosity and behavioural intention ( $F(47,2175) = 27.726, P < 0.05$ ). This implies that there was significant influence of attitude, subjective norms- intrinsic factor and perceived behavioural control- extrinsic factor) and religiosity on the behavioural intention of Muslim consumers towards the patronage of *halāl* food.

Karijin, et al (2007) affirmed that attitude, subjective norms and perceived behavioural control as propounded by Icek Ajzen in his Theory of Planned Behaviour (TPB) have significant relationships with behavioural intention of the Muslim consumers in consuming *halāl* food.<sup>12</sup> This was asserted from the study they carried out on determinants of *halāl* meat consumption in France. It was discovered that personal positive attitude, peer group's influence and perceived behavioural control play significant roles towards the consumers' intentions in purchasing *halāl* food. Also, Abdul Khalek adopted the Theory of Planned Behaviour in her research carried out among 452 respondents from among Generation Y, in five Malaysian Private Universities and submitted that attitude, subjective norms and perceived behavioural control had significant relationship with behavioural intention of Generation Y in their choices for *halāl* food consumption.<sup>13</sup> Siti, et al (2017) studied "The relationship of *halāl* Food Consumption and Psychological Features of Muslim Students in Malaysian Public Universities". The study involved 730 Muslim students between 18 and 36 years randomly selected. The finding of the study asserted that subjective norms had significant relationship with intention. The result of this study confirms their finding.<sup>14</sup>

Monteire studied "Factors that Influence the Decision of Patrons to Dine at Selected Indian Restaurant in the Cities and submitted that Theory of Planned Behaviour has significant relationship with the behavioural intention of consumers in their choices for food in Indian restaurant as it was claimed that employee friendliness, cleanliness of rest-rooms, value for money, price, spicy food and efficient service which fall across

attitude, subjective norms which are external influences and perceived behavioural control like the price and value for money. This work further asserts his result as attitude, subjective norms and perceived behavioural control (TPB) were found significant.<sup>15</sup>

In a study carried by Delender (1994), religion and religiosity was also asserted as a determinant in the behavioural intention of purchasing *halāl* food by Muslim consumers. The research finding indicates that religion determines consumer's cognitive structure and thus, influences his/her behaviour.<sup>16</sup> The influence of religiosity is significant in the behavioural intention of Muslim consumers towards *halāl* food consumption. This was confirmed by Marzuk (2012) in her Ph.D thesis. The result of this research corresponds with the finding of her study.<sup>17</sup>

In the same vein, Syed, et al (2011), asserted that religiosity has full influence in the purchase behaviour of Muslims.<sup>18</sup> Bonne et al (2007) revealed that religion influences consumption behaviour and intention of a consumer.<sup>19</sup>

Muhammad (2018) affirmed that religiosity significantly influenced consumers' purchase intention.<sup>20</sup> Abdul Khaleek, in her research carried out among 452 respondents from among Generation Y, in five Malaysian Private Universities submitted that religiosity has significant influence on behavioural intention.<sup>21</sup> This finding also corroborates her result.

Ibrahim (2015) in her study "The Fast Food Consumption Experiences and Identify Construction of British Muslims: A phenomenological study" revealed that participants exhibited religious identity as more central as Muslims in their choice for food they eat. This means that their religion, Islām, has significant influence on their decision on the choices of food they consumed.<sup>22</sup>

Result from the Table 4.19 shows the influence of certification and logistics on the behavioural intention of Muslim consumers towards *halāl* food patronage. The result reveals that there was significant influence of certification and behavioural intention ( $F(28,2194) = 66.943, P < 0.05$ ) and also between logistics and behavioural intention ( $F(32,2190) = 41.244, P < 0.05$ ). This implies that the extent of influence certification

and logistics on the behavioural intention of Muslim consumers towards *halāl* food patronage is to a great extent. *Halāl* food label/logo had positive correlation on purchasing intention of Muslim consumers (Imran, 2016).<sup>23</sup> Abdul (2008) stated that *halāl* food logo that is issued by a reputable and licensed agency guarantees to the consumers that the product that carries the logo is *halāl* compliant and, thus, strengthens their confidence/ or trust of the *halāl*ness of the product.<sup>24</sup> As the case of Malaysia, government *halāl* logo influences *halāl* food consumption. This was submitted by in the findings of the study. The result of this study support their findings. Wan (2017)<sup>25</sup> researched on “Developing a Model for *halāl* Food Supply Chain Implementation” and confirmed that *halāl* food supply chain- logistics and procurement can positively affect an organisation’s marketing and financial performance. This can be interpreted that logistics has significant influence on the *halāl* food consumers. This corresponds to the result of this study.

#### 4.3.22 Results of hypotheses

H: There is no significant relationship between demographic profiles and level of awareness, knowledge and perception of *halāl* food among Muslim consumers of *halāl* food.

**Table 4.20 Correlation matrix showing the relationship between demographic profiles and level of awareness, knowledge and perception of *halāl* food among Muslim consumers**

Variables	1	2	3	4	5	6	Mean	SD
Awareness, Knowledge and Perception of <i>halāl</i> food	1						135.655	18.630
Gender	-.141**	1					1.539	.499
Ethnicity	-.040	-.033	1				1.049	.321
Age	.094**	-.191**	-.013	1			2.914	2.066
Occupation	-.090**	.097**	-.044*	-.586**	1		2.833	1.142
State of residence	-.008	.004	-.037	.166**	-.250**	1	3.521	1.692



Result from Table 4.20 shows that three out of the five independent variables (gender, age and occupation) had a significant positive relationship with the dependent variables (awareness, knowledge and perception of *ḥalāl* food). Gender was significant:  $r(2221) = -.141, p < 0.05$ , age was also significant  $r(2221) = .094, p < 0.05$ , and occupation:  $r(2221) = -.090, p < 0.05$ . While ethnicity  $r(2221) = -.040, p > 0.05$ , and state of residence  $r(2221) = -.008, p < 0.05$ , did not have significant relationship with awareness, knowledge and perception of *ḥalāl* food. The stated hypothesis is therefore, significantly partly accepted.

**H: There is no significant relationship between planned behaviour (attitude, subjective norms- intrinsic factor and perceived behavioural control- extrinsic factor) and religiosity and the behavioural intention of Muslim consumers towards the patronage of *halāl* food.**

**Table 4.21: Correlation matrix showing the relationship between perceived behaviour (attitude, subjective norms- intrinsic factor and perceived behavioural control- extrinsic factor) and religiosity and the behavioural intention of Muslim consumers**

Variables	1	2	3	4	5	Mean	SD
Behavioural intention	1					29.978	5.281
Attitude	.682**	1				42.111	6.994
Subjective norm	.586**	.659**	1			25.210	4.911
Perceived behavior	.526**	.476**	.448**	1		27.655	6.416
Religiosity	.594**	.566**	.460**	.359**	1	63.904	7.668

Result from Table 4.21 shows that the four independent variables (attitude, subjective norm, perceived behaviour and religiosity) have significant positive and linear relationship with the dependent variable (behavioural intention). Attitude was significant:  $r(2221) = .682$ ,  $p < 0.05$ , subjective norm was also significant  $r(2221) = .586$ ,  $p < 0.05$ , perceived behaviour  $r(2221) = .526$ ,  $p < 0.05$  and religiosity:  $r(2221) = .594$ ,  $p < 0.05$  are both significant. The stated null hypothesis is, therefore, rejected.

H: There is no significant relationship between certification and logistics on behavioural intention of Muslim consumers of *halāl* food.

**Table 4.22: Correlation matrix showing the relationship between certification**

Variables	1	2	3	Mean	SD
Behavioural intention	1			29.978	5.281
Certification	.650**	1		29.204	5.193
Logistics	.666**	.923**	1	61.969	9.936

**and logistics on behavioural intention of Muslim consumers of *halāl* food**

Result from Table 4.22 shows that the two independent variables (certification and logistics) had a significant positive linear relationship with the dependent variable (behavioural intention). Certification was significant:  $r(2221) = .650, p < 0.05$ , and Logistics:  $r(2221) = .666, p < 0.05$ . The stated null hypothesis is, therefore, rejected.

### **4.3. Summary**

This segment presents answer to research question 1 in achieving the stated objective in chapter one. The result indicates that there was a positive joint influence of awareness, knowledge, planned behaviour, religiosity, behavioural intention, perception of *halāl* certification and logistics on the perception of Muslim consumers of *halāl* food. This answers research question one and achieved objective one of the study. From the descriptive statistics results, Muslim consumers in South West, Nigeria have a good knowledge of *halāl* food. They possess good level of awareness, knowledge of *halāl* food and exhibited a positive perception of it. Also, the result confirms that planned behaviour (attitude, subjective norms and perceived behaviour) and religiosity had significant influences on behavioural intention of Muslim consumers towards *halāl* food consumption.

The result in Table 4.20 depicts that the null hypothesis was significantly rejected as awareness, knowledge, attitude, behavioural intention, religiosity, perception of *halāl* certification had significant relationships with the perception of Muslim consumers of *halāl* food. Further tests of hypotheses reveal that gender, age and occupation have significant relationship with awareness, knowledge and perception of *halāl* food while ethnicity and state of residence did not have significant relationships with awareness, knowledge and perception of *halāl* food among Muslim consumers (Table 5.21). Thus, the hypothesis is significantly rejected. Table 5.21 depicts that attitude, subjective norms, perceived behaviour and religiosity) have significant relationships with behavioural intention of Muslim consumers. Thus, the null hypothesis is rejected. Table 4.22 depicts that the two independent variables (certification and logistics) had significant relationship with the dependent variable (behavioural intention). Thus, the null hypothesis is rejected.

#### 4.4.1 Awareness of primary food workers of *ḥalāl* food

**Table 4.23: Distribution of responses and mean of awareness of primary food workers of *ḥalāl* food**

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Standard Deviation
I am aware of <i>ḥalāl</i> food.	3 (1.0)	17 (5.9)	23 (7.9)	159 (54.8)	88 (30.3)	4.07586	.840849
I have <i>ḥalāl</i> food knowledge.	4 (1.4)	15 (5.2)	25 (8.6)	146 (50.3)	100 (34.5)	4.1138	.86701
<i>Ḥalāl</i> food is common in my area.	2 (.7)	16 (5.5)	45 (15.5)	138 (47.6)	89 (30.7)	4.0207	.86428
I sell <i>ḥalāl</i> food	7 (2.4)	10 (3.4)	30 (10.3)	136 (46.9)	107 (36.9)	4.1241	.90277
I am aware of <i>ḥalāl</i> food ingredients.	8 (2.8)	14 (4.8)	35 (12.1)	152 (52.4)	81 (27.9)	3.9793	.91862
I buy ingredients from <i>ḥalāl</i> sources.	6 (2.1)	16 (5.5)	33 (11.4)	139 (47.9)	96 (33.1)	4.0448	.92339
I am aware of <i>ḥalāl</i> slaughter.	4 (1.4)	28 (9.7)	32 (11.0)	128 (44.1)	98 (33.8)	3.9931	.98076
I am aware of <i>ḥalāl</i> beef	13 (4.5)	14 (4.8)	32 (11.0)	135 (46.6)	96 (33.1)	3.98971	1.02050
I buy meat from <i>ḥalāl</i> source	10 (3.4)	12 (4.1)	13 (4.5)	165 (56.9)	90 (31.0)	4.0793	.90972
I am aware	25	30	42	101	92	3.7069	1.25349

of <i>ḥalāl</i> food festivals.	(8.6)	(10.3)	(14.5)	(34.8)	(31.7)		
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The Table indicates that majority of the respondents (85.1%) strongly agreed 88 (30.3%) and agreed 150 (54.8%) that they were aware of *ḥalāl* food. However, 3 (1%) strongly disagreed, 17 (5.9%) disagreed and 23 (7.9%) neutral showed that they were not aware of what *ḥalāl* food is or whether *ḥalāl* food is a special food for consumption for the Muslims. In general, many primary food workers were aware of *ḥalāl* food as Islāmic doctrine.

In the Table, it reflects that 100 (34.5%) and 146 (50.3%) which indicates 246 (84.8%) of the respondents strongly agreed and agreed that they have *ḥalāl* food knowledge. This formed the majority of the respondents. Only 19 (6.6%) strongly disagreed and disagreed that they have *ḥalāl* food knowledge while 25 (8.6%) respondents were neutral in their responses to the item. This implies that majority of the primary food workers possessed *ḥalāl* food knowledge

Also, 30.7% and 47.6% of the respondents agreed and strongly agreed that *ḥalāl* food is common in their areas. This indicates that 78.3% of the respondents which forms the majority of the respondents strongly agreed and agreed to the item. However, 21.7% strongly disagreed, disagreed and neutral that *ḥalāl* food is common in their area. It can be inferred that majority of the primary food workers in South West, Nigeria testified that *ḥalāl* food is common in their areas.

The Table above shows that 83.8% strongly agreed (36.9%) and agreed (46.9%) that they sold *ḥalāl* food while 7 (2.4%) strongly disagreed 5.6%, disagreed 3.4% and neutral 10.3% to the statement “I sell *ḥalāl* food.” The result indicates that many among the primary food workers sold *ḥalāl* food in their areas.

The result from this Table indicates that primary food workers in South West, Nigeria were highly aware of *ḥalāl* ingredients as 27.9% and 52.4% strongly agreed and agreed to the statement “I am aware of *ḥalāl* food ingredients” respectively. This formed 80.3% of the respondents. The percentage is considered high. Thus, it represents the majority.

The result from this Table indicates that primary food workers in South West Nigeria buy ingredients from *ḥalāl* sources. The Table shows that 236 (81%) of the respondents supported the statement “I buy ingredients from *ḥalāl* sources” as 96 (33.1%) and 139 (47.9%) strongly agreed and agreed to the statement.



Also, the Table shows that 77.9% of the respondents were aware of *ḥalāl* slaughter as 98 (33.8%) strongly agreed and 128 (44.1%) agreed to the statement “I am aware of *ḥalāl* slaughter.” Only 4 (1.4%) strongly disagreed, 28 (9.7%) disagreed and 32 (11%) neutral. Thus, it can be inferred that primary food workers in South West, Nigeria were aware of *ḥalāl* slaughter.

The Table depicts that most primary food workers were aware of *ḥalāl* beef in South West, Nigeria as 231 (79.7%) of the respondents claimed that they were aware of *ḥalāl* beef. However, 13 (4.5%) strongly disagreed, 14 (4.8%) disagreed and 32 (11%) neutral were not aware of *ḥalāl* slaughter. Thus, it can be generalised that most primary food workers in South West, Nigeria were aware of *ḥalāl* beef.

Reactions of the respondents to the statement “I buy meat from *ḥalāl* source” indicated that 90 (31%) of the respondents strongly agreed and 165 (56.9%) agreed to the statement. Only 10 (3.4%) strongly disagreed 12 (4%) disagreed and 13 (4.5%) were neutral to the statement. This suggests that majority of the primary food workers bought meat from *ḥalāl* sources.

In the Table, it shows that 66.5% of the respondents testified to the statement “I am aware of *ḥalāl* food festivals” as 92 (31.7) strongly agreed and 101 (34.8%) agreed to the statement. However, 25 (8.6%) strongly disagreed, 30 (10.3%) disagreed and 42 (14.5%) stayed neutral that they were not aware. This can be interpreted that, though, many among the primary food workers are aware of *ḥalāl* food festivals, a significant number among them were not aware of *ḥalāl* food festivals. This suggests that there is a need for more publicity of *ḥalāl* food festivals to create more awareness among the primary food workers.

The Table reveals that many among the primary food workers in the South West, Nigeria are quite aware of *ḥalāl* food with an average variable of mean of 4.0128. However, there is a need for more publicity of *ḥalāl* food festivals to create more awareness among them.

#### 4.4.2 Knowledge of *halāl* food possessed by primary food workers

**Table 4.24.: Distribution of responses and mean of primary food workers on their knowledge of *halāl* food**

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Standard Deviation
<i>Halāl</i> food is the only lawful food for Muslims.	3 (1.0)	10 (3.4)	23 (7.9)	163 (56.2)	91 (31.4)	4.1345	.77984
Alcohol and its products are unlawful for Muslim consumption	3 (1.0)	15 (5.2)	10 (3.4)	131 (45.2)	131 (45.2)	4.28	.842
Animal that is not slaughtered and its products are unlawful for Muslim consumption.	6 (2.1)	9 (3.1)	13 (4.5)	144 (49.7)	118 (40.7)	4.2379	.84137
Animal that Allāh's name is not invoked when slaughtered and its products are not lawful for Muslim consumption	12 (4.1)	10 (3.4)	18 (6.2)	142 (49.0)	108 (37.2)	4.1172	.96659
<i>Halāl</i> food should be prepared using separate utensils	5 (1.7)	12 (4.1)	13 (4.5)	189 (65.2)	71 (24.5)	4.0655	.77984
<i>Halāl</i> food should be stored separately from non <i>halāl</i> food	9 (3.1)	14 (4.8)	11 (3.8)	158 (54.5)	98 (33.8)	4.1103	.91597
Muslim slaughterer must slaughter animal for	9 (3.1)	15 (5.2)	26 (9.0)	161 (55.5)	79 (27.2)	3.9862	.92251

Muslim consumption							
Ingredients from non <i>halāl</i> source make the food products to become unlawful for Muslim consumption	4 (1.4)	12 (4.1)	24 (8.3)	171 (59.0)	79 (27.2)	4.0655	.80172

As demonstrated in the Table, majority of the respondents subscribed to the statement “*Ḥalāl* food is the only lawful food recommended for Muslims” with 87.6%. This can be interpreted that the primary food workers in South West, Nigeria accepted *halāl* food as the only lawful food recommended for Muslims by being strongly agreed 31.4% and agreed 56.2%. This is considered high and thus, suggests that primary food workers in South West, Nigeria possessed some level of knowledge of *ḥalāl* food concept.

The participants showed their knowledge of *ḥalāl* food with 131 (45.2%) strongly agreed and 131 (45.2%) agreed. This formed (90.4%) of the respondents. They agreed to the statement “Alcohol and its products are unlawful for Muslim consumption.” 3 (1%) strongly disagreed, 15 (5.2%) disagreed and 10 (3.4%) neutral. This can be interpreted that the primary food workers in South West, Nigeria accepted alcohol as *ḥarām* drink for Muslims.

Majority of the participants attested to the statement “Animal that is not slaughtered according to Islāmic rites is not edible for Muslim consumption” with 118 (40.7%) strongly agreed and 144 (49.7%) agreed. This formed the majority of the respondents 262 (90.4%). It can be inferred that primary food workers understood that animal should be slaughtered in Islāmic way to make it edible for Muslim consumption.

It is depicted in the Table that 108 (37.2%) strongly agreed and 142 (49%) agreed to the statement “*Ḥalāl* animal must be slaughtered invoking Allāh’s name before the meat can be edible for Muslim consumption.” This formed 67.4% of the respondents and considered high. 18 (6.2%).1% were neutral, 10 (3.4%) agreed and 12 (4.1%) strongly disagreed. This formed only 22.5%. The results implied that majority of the primary food workers possessed some level of knowledge of the concept of *ḥalāl* food.

Some level of knowledge of *ḥalāl* food concept was displayed by primary food workers by their responses to item “*Ḥalāl* food should be prepared using separate utensils” as 260 (89.7%) of the respondents with strongly agreed 71 (24.5%) and agreed 189 (65.2%) to the statement. The result suggests that not many respondents among the primary food workers in South West, Nigeria understood that utensils used in preparing non-*ḥalāl* food should not be used to prepare *ḥalāl* food.

Knowledge of primary food workers on *ḥalāl* food is depicted with the responses of the participants to the item “*Ḥalāl* food should be separately stored from non *ḥalāl* food.” The Table shows that 88.3% supported the statement while 11.7% did not support. This reflects some level of knowledge of *ḥalāl* food among the primary food workers.

It was demonstrated by the respondents that they possess some knowledge of *ḥalāl* food concept as majority of them subscribed to the statement “Muslim slaughterer must slaughter animal for Muslim consumption” with 82.7% as strongly agreed 27.2% and agreed 55.5% 9% neutral, 5.2% disagreed and 3.1% strongly disagreed. From this result, it can be stated that the primary food workers in South West, Nigeria understood that Muslim slaughterer must slaughter animal for Muslim consumption.

The participants showed their knowledge of *ḥalāl* food with 27.2% strongly agreed and 59% agreed. This formed 86% of the respondents. They agreed to the statement “ingredients from non *ḥalāl* source make the food products to become unlawful for Muslim consumption.” Only 1.4% strongly disagreed, 4.1% disagreed and 8.3% neutral. This result indicates that many of the respondents understood that non-*ḥalāl* ingredient, if used to prepare *ḥalāl* food, renders the food *ḥarām* for Muslim consumption.

In summary, the result from this Table suggests, with an average variable mean of 4.125, that the primary food workers in South West, Nigeria possess good knowledge of *ḥalāl* food. This is exhibited through their responses to many of the items under the construct which shows high percentage of receptivity of the statement meaning that they really understood what constitutes *ḥalāl* food. This can be further established by their responses to prohibition of alcohol and animal that is not slaughtered in line with *Sharī‘ah* is *ḥarām* for Muslim consumption with 90.4% to each of the items.

#### 4.4.3: Perception of primary food workers of *ḥalāl* food

**Table 4.25: Distribution of responses and mean of perception of primary food workers of *ḥalāl* food**

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Standard Deviation
<i>Ḥalāl</i> food is spiritual for Muslims.	6 (2.1)	6 (2.1)	18 (6.2)	166 (57.2)	94 (32.4)	4.1586	.79510
<i>Ḥalāl</i> food is compulsory for Muslims.	3 (1.0)	8 (2.8)	26 (9.0)	159 (54.8)	94 (32.4)	4.1483	.77286
There is health benefit from <i>ḥalāl</i> food for consumers.	2 (.7)	10 (3.4)	23 (7.9)	144 (49.7)	111 (38.3)	4.2138	.78644
<i>Ḥalāl</i> food benefits both Muslims and non Muslims.	3 (1.0)	16 (5.5)	29 (10.0)	152 (52.4)	90 (31.0)	4.0690	.84963
<i>Ḥalāl</i> food is hygienic.	2 (.7)	14 (4.8)	23 (7.9)	159 (54.8)	92 (31.7)	4.1207	.79960
<i>Ḥalāl</i> food is tastier.	5 (1.7)	12 (4.1)	19 (6.6)	150 (51.7)	104 (35.9)	4.158621	.8497984
<i>Ḥalāl</i> food enhances quality of life of the consumers.	6 (2.1)	17 (5.9)	16 (5.5)	147 (50.7)	104 (35.9)	4.1241	.90659
<i>Ḥalāl</i> food is safe	4 (1.4)	9 (3.1)	23 (7.9)	152 (52.4)	102 (35.2)	4.1690	.80809

Table 4.25 shows that 32.4% strongly agreed and 57.2% agreed to the statement “*Halāl* food is spiritual for Muslims.” However, 2.1% strongly disagreed, 2.1% disagreed and 6.2% neutral. Strongly agreed and agreed formed 89.6% of the total respondents. It is considered high. This suggests that majority of the respondents considered *halāl* food as spiritual for Muslims.

The result to the statement “*Halāl* food is compulsory for Muslims” reflects that 32.4% strongly agreed and 54.8% agreed. Only 1% strongly disagreed, 2.8% disagreed and 9.0% is neutral to the statement. The percentage of the supporters to the statement was 87.2%. This can be considered high. Thus, it indicates that many of the respondents understood that *halāl* food is compulsory but not a matter of interest for the Muslims.

Those who submitted to the statement “There is health benefit from *halāl* food for consumers” formed 88% of the respondents. Only 12% of the respondents did not accept the statement. This implied that many among the primary food workers accepted that there is added health benefit of *halāl* food above non-*halāl* food.

It is exhibited in the Table that 31% strongly agreed and 52.4.0% agreed to the statement “*Halāl* food is good for both Muslims and non-Muslims.” Only 1% strongly disagreed, 5.5% disagreed and 10% neutral. Strongly agreed and agreed formed 83.4% of the total respondents. It is considered high. This suggests that majority of the respondents considered *halāl* food as beneficial not only to Muslims but also non-Muslims.

The results to the statement “*Halāl* food is hygienic” demonstrated that 31.7% strongly agreed and 54.8% agreed. However, 0.7% strongly disagreed, 4.8% disagreed and 7.9% is neutral to the statement. The percentage of the supporters to the statement was 83.4%. This is considered high. Thus, it indicates that many of the respondents have knowledge of *halāl* food.

Also, 35.9% and 51.7% of the respondents strongly agreed and agreed that *halāl* food is tastier. This indicates that 87.6% of the respondents which formed the majority of the respondents strongly agreed and agreed to the statement “*Halāl* food is tastier.” Only 1.7% strongly disagreed, 4.1.8% disagreed and 6.6% neutral. It can be inferred that many primary food workers accepted that *halāl* food is tastier.

In the Table, it reflects that 35.2% and 52.4% which formed 87.6% of the respondents strongly agreed and agreed that *halāl* food guarantees food safety. This formed the majority of the respondents. Only 1.4% strongly disagreed and 3.1% disagreed while 7.9% of the respondents were neutral in their responses to the item. This indicates that many primary food workers considered *halāl* food safe for consumption.

Those who submitted to the statement “*Halāl* food enhances quality of life of the consumers were 351 (86.6%) of the respondents. Only 41 (13.5% of the respondents did not accept the statement. This implies that many respondents among the primary food workers agreed that *halāl* food fetches the consumer some social quality.

Thus, from the results depicted in Table 5.25, it can be submitted that the primary food workers have a high positive perception towards *halāl* food with an average variable mean of 4.1452. Nevertheless, there is a need for more education, enlightenment and sensitisation on *halāl* food for the primary food processors.



**Table 4.26: Distribution of responses and mean of knowledge of primary food workers on *ḥalāl* slaughter (Options: Never necessary- NN, Unnecessary- UN, Necessary-N, Very Necessary- VN, Extremely- Necessary- EN)**

Item	NN	UN	N	VN	EN	Mean	StD.
A Muslim must slaughter the cattle	3 (1.0)	14 (4.8)	40 (13.8)	157 (54.1)	76 (26.2)	3.9966	8.2980
<i>ah wa Allāh Akbar</i> is sorry when animals are	7 (2.4)	10 (3.5)	45 (15.5)	123 (42.4)	105 (36.2)	4.0655	.93334
Animals can be slaughtered in the presence of the other animals on the death roll	89 (30.7)	63 (21.7)	40 (13.8)	64 (22.1)	34 (11.7)	2.6241	1.41425
The animal must be slaughtered with a single swift slit.	10 (3.4)	15 (5.2)	47 (16.2)	140 (48.3)	78 (26.9)	3.9000	.97032
Blood must be allowed to gush out completely from the body of the slaughtered animal before post slaughter processing commences.	4 (1.4)	19 (6.6)	43 (14.7)	164 (56.6)	60 (20.7)	3.8862	.85496
Animals are allowed to rest after long distance of conveyance before they are slaughtered	8 (2.8)	18 (6.2)	38 (13.1)	161 (55.5)	65 (22.4)	3.8862	.91743
The animal must be allowed to die off completely before skinning.	6 (2.1)	10 (3.4)	36 (12.4)	160 (55.2)	78 (26.9)	4.0138	.84825
Animals must not be dragged or beaten to the slab.	4 (1.4)	18 (6.2)	56 (19.3)	141 (48.6)	71 (24.5)	3.8862	.89451
Animals must be fed with <i>ḥalāl</i> feeds and substances.	7 (2.4)	14 (4.8)	37 (12.8)	152 (52.4)	80 (27.6)	3.9793	.90343
Beef, chicken and pork can be packed and cooked in the same container.	116 (40.0)	59 (20.3)	40 (13.8)	41 (14.1)	34 (11.7)	2.3724	1.42370
Beef, chicken and pork can be stored in the same refrigerator.	129 (44.5)	47 (16.2)	37 (12.8)	53 (18.3)	24 (8.3)	2.2966	1.40254

Cattle, chicken and pigs can be slaughtered with the same knife or equipment.	128 (44.1)	60 (20.7)	29 (10.0)	34 (11.7)	39 (13.4)	2.2966	1.46292
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It is demonstrated in the Table that 94.1% of the respondents supported the statement “A Muslim must slaughter the cattle.” Those who found it necessary, very necessary and extremely necessary formed 26.2%, 54.1% and 13.8% respectively. Only 5.9% did not support the statement. From this result, it can be suggested that primary food workers in South West Nigeria possessed some level of knowledge of *ḥalāl* food slaughter.

The participants showed their level of knowledge of *ḥalāl* food with 15.5% necessary, 42.4% very necessary and 36.2% extremely necessary to the statement “*Bismillah wa Allāh Akbar* is compulsory when animals are slaughtered.” This formed 93.9% of the respondents. Only 5.9% of the respondents supported never necessary and unnecessary. This can be interpreted that the primary food processors knew that it is important to pronounce the name of Allāh when slaughtering *ḥalāl* animal to make it edible for the Muslims.

Knowledge of primary food workers on *ḥalāl* slaughter is depicted with the responses of the participants to the item “Animals can be slaughtered in the presence of the other animals on the death roll.” From the Table, it reflects that 138 (47.6%) supported the statement. However, 152 (52.4%) did not support. This reflects that not very many among primary food workers knew that it is Islāmically unlawful to slaughter animal in the presence of other animals on death roll.

The participants attested to the statement “The animal must be slaughtered with a single swift slit” with 47 (16.2) necessary, 140 (48.3%) very necessary and 78 (26.9) extremely necessary. This formed 265 (91.4%) of the respondents. It can be inferred that primary food workers understood that animal should be slaughtered swiftly to reduce the death pain for the animal. This is in line with the Prophetic recommendation.

Some level of knowledge of *ḥalāl* food concept was displayed by primary food workers by their responses to item “Blood must be allowed to gush out completely from the body of the slaughtered animal before post slaughter processing commences” as 267 (92%) of the respondents accepted the statement. The result suggests that many among the primary food workers in South West, Nigeria understood that blood must gush out completely from the animal before any post slaughter processes are commenced.

It is depicted in the Table that 65 (22.4%) subscribed to the statement “animals are allowed to rest after long distance of conveyance before they are slaughtered” with 38 (13.1%) necessary, 161 (55.5%) very necessary and 65 (22.4%) extremely necessary. This formed 264 (91%) of the respondents and considered high. However, 8 (2.8%) and 18 (6.2%) stated that it was never necessary and unnecessary respectively. This formed only 26 (9%). The result implies that majority of the primary food workers possessed some level of knowledge of the concept of *ḥalāl* slaughter.

It was demonstrated by the respondents that they possess some knowledge of *ḥalāl* food concept as majority of them subscribed to the statement “The animal must be allowed to die off completely before skinning.” The Table shows that the respondents supported the item with 36 (12.4) necessary, 160 (55.2%) very necessary and 78 (26.9) extremely necessary. This formed 82.1% of the respondents. This formed 274 (94.5%) of the respondents. However, 6 (2.1%) and 10 (3.4%) viewed it never necessary and unnecessary respectively. This formed only 16 (5.5%) of the respondents. From this result, it can be stated that the primary food workers in South West, Nigeria understood that the animal must be allowed to die off completely before skinning.

The participants reacted to the statement “Animals must not be dragged or beaten to the slab” with 56 (19.3%) necessary, 141 (48.6%) very necessary and 71 (24.5%) extremely necessary. This formed 268 (92.4%) of the respondents who agreed to the statement. Only 22 (7.6%) of the respondents with 4 (1.4%) and 18 (6.2%) supported the options “never necessary and unnecessary” respectively. This can be interpreted that the primary food processors in South West, Nigeria understood that animals must be treated with kindness even up to the time of slaughter.

Knowledge of primary food workers on *ḥalāl* food is depicted with the responses of the participants to the item “Animals must be fed with *ḥalāl* feeds and substances.” In the Table, 269 (92.8%) supported the statement with 37 (12.8%) necessary, 152 (52.4%) very necessary and 80 (27.6%) extremely necessary. Only 21 (7.2%) did not support. This reflects that the respondents understood that when *ḥalāl* animal is fed with filth and non-*ḥalāl* substance, the animal meat may not be edible for Muslim consumption.

Majority of the participants opposed the statement “Beef, chicken and pork can be packed and cooked in the same container” with 116 (40%) never necessary and 59

(20.3%) unnecessary. This formed 175 (60.3%) and considered high. It can be interpreted that primary food workers understood that if beef, chicken and pork are packed and cooked in the same container, the *ḥalāl* beef and chicken have become *ḥarām*. It can be inferred that the primary food workers possess some level of knowledge of *ḥalāl* slaughter.

Some level of knowledge of *ḥalāl* food concept was displayed by primary food workers by their responses to item “Beef, chicken and pork can be cooked and stored in the same refrigerator” as 176 (60.7%) of the respondents did not support the statement. The result suggests that still, many among the primary food workers in the South West, Nigeria did not understand that when beef and pork are cooked together in the same pot the beef becomes *ḥarām*.

It is stated in the Table that “cattle, chicken and pigs can be slaughtered with the same knife or equipment.” This statement was rejected by 29 (10%) necessary, 34 (11.7%) very necessary and 39 (13.4%) extremely necessary. This formed 102 (35.1%) of the respondents. But supported by 128 (44.1%) never necessary and 60 (20.7%) unnecessary. This formed 188 (64.8%). The result implies that good number of the respondents among the primary food workers understood that using same knife or equipment used for non-*ḥalāl* food to process *ḥalāl* food makes the *ḥalāl* food to become *ḥarām*.

Generally, the result from Table 5.2.6 shows that there is a moderate possession of knowledge of *ḥalāl* slaughter among the primary food workers in South West Nigeria with an average mean of 3.4336. This could be because the workers consist of both Muslims and non-Muslims. However, the result suggests that there is need to expose and educate the primary food processors on *ḥalāl* slaughter.

**Table 4.27: Distribution of responses and mean of awareness of primary food workers of *ḥalāl* food certification**

Item	SD	D	N	A	SA	Mean	Standard Deviation
I am aware of <i>ḥalāl</i> food certification.	15 (5.2)	92 (31.7)	57 (19.7)	108 (37.2)	18 (6.2)	3.0759	1.06912
I am aware of <i>ḥalāl</i> food certification agencies.	50 (17.2)	63 (21.7)	46 (15.9)	100 (34.5)	31 (10.7)	2.9966	1.29812
I am aware of <i>ḥalāl</i> food vendors with <i>ḥalāl</i> certificate.	46 (15.9)	70 (24.1)	43 (14.8)	94 (32.4)	37 (12.8)	3.0207	1.30990
I am aware of application procedure on <i>ḥalāl</i> food certification.	52 (17.9)	57 (19.7)	61 (21.0)	79 (27.2)	41 (14.1)	3.0000	1.3258150
<i>Ḥalāl</i> food agencies have visited my canteen for <i>ḥalāl</i> food certification.	47 (16.2)	69 (23.8)	42 (14.5)	93 (32.1)	39 (13.4)	3.0276	1.32291

The Table indicates that 126 (43.4%) of the respondents affirmed that they are aware of *halāl* food certification with strongly agreed 18 (6.2%) and agreed 108 (37.2%). However, 15 (5.2%) strongly disagreed, 192 (31.7%) disagreed and 57 (19.7%) neutral which formed 56.6% of the respondents showed that they were not aware of *halāl* food certification. The result indicates that many primary food workers were not aware of *halāl* food certification.

In the Table, it reflects that 31 (10.7%) and 100 (34.5%) which formed 131 (45.2%) of the respondents strongly agreed and agreed that they are aware of *halāl* food certification agencies. However, 50 (17.2%) strongly disagreed and 63 (21.7%) disagreed that they are aware of *halāl* food certification agencies while 46 (15.9%) respondents were neutral in their responses to the item. They formed 54.8% which represents the majority of the respondents. This implies that majority of the primary food workers were not aware of *halāl* food certification.

Also, 37 (12.8%) and 94 (32.4%) of the respondents agreed and strongly agreed that they are aware of *halāl* food vendors with *halāl* certificate. This indicates that 131 (45.2%) of the respondents which forms the majority of the respondents strongly agreed and agreed to the item. However, 46 (15.9%) strongly disagreed, 70 (24.1%) disagreed and 43 (14.8%) neutral that they were not aware of *halāl* food vendors with *halāl* certificate. They formed 159 (54.8%). It can be inferred that majority of the primary food workers in South West Nigeria were not aware of *halāl* food vendors with *halāl* certificates.

From the Table, 41(14.1%) strongly agreed and 79 (27.2) agreed which formed 120 (41.3%) that they were aware of application procedures on *halāl* food certification while 52 (17.9%) strongly disagreed, 57 (19.7%) disagreed and 61 (21%) neutral to the statement “I am aware of application procedures on *halāl* food certification.” The result indicates that many among the primary food workers were not aware of application procedures on *halāl* food certification.

The Table shows 39 (13.4%) of the respondents who strongly agreed and 93 (32.1%) who agreed to the statement “*halāl* food agencies have visited my canteen for *halāl* food certification” respectively. This formed 132 (45.5%) of the respondents. However, 47 (16.2%) strongly disagreed, 69 (23.8%) disagreed and 42 (14.5%) neutral to the statement and represents 54.5% of the respondents. The result indicates that

many of the primary food workers in South West, Nigeria have not been visited by any *ḥalāl* food certification agencies for *ḥalāl* food certification.

From the result extracted from Table 4.27, it can be submitted that primary food workers in South West, Nigeria only have a moderate level of awareness of *ḥalāl* certification with an average mean of 3.0241. This suggests that more effort is required in exposing, educating and sensitising the primary food processors on *ḥalāl* food certification for wide receptivity.



#### 4.4.6 Primary food workers' perception on *halāl* food certification

**Table 4.28: Distribution of responses and mean of primary food workers' perception of *halāl* food certification**

*Halāl* certification indicates that...

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Standard Deviation
<i>Halāl</i> certification/logo signifies that the food is prepared strictly in compliance to <i>Shari'ah</i> .	4 (1.4)	3 (1.0)	14 (4.8)	211 (72.8)	58 (20.0)	4.0897	.63809
Genuine <i>halāl</i> food logo reduces food scandal and fraud.	2 (.7)	5 (1.7)	26 (9.0)	160 (54.8)	97 (33.4)	4.3276	2.44658
<i>Halāl</i> food certificate guarantees food safety.	5 (1.7)	10 (3.4)	12 (4.1)	201 (69.3)	62 (21.4)	4.0517	.73992
<i>Halāl</i> food certificate guarantees healthy food.	1 (.3)	6 (2.1)	23 (7.9)	172 (59.3)	88 (30.3)	4.1724	.68443
<i>Halāl</i> food certificate guarantees food quality.	4 (1.4)	12 (4.1)	14 (4.8)	179 (61.7)	81 (27.9)	4.1069	.77969
Establishment of government <i>halāl</i> certification agencies would influence people to consume <i>halāl</i> food.	5 (1.7)	3 (1.0)	26 (9.0)	164 (56.6)	92 (31.7)	4.1552	.76248
Provides a comparative advantage over non <i>halāl</i> certified food	11 (3.8)	10 (3.4)	25 (8.6)	178 (61.4)	66 (22.8)	3.9586	.89114

service firms							
<i>Halāl</i> certification/logo signifies that the food is prepared strictly in compliance to <i>Shari'ah</i> .	4 (1.4)	12 (4.1)	14 (4.8)	159 (54.8)	101 (34.8)	4.175 9	.81089

In the above Table, 58 (20%) strongly agreed and 211 (72.8%) agreed to the statement “*Halāl* certification/logo signifies that the food is prepared strictly in compliance to *Sharī’ah*. Only 4 (1.4%) strongly disagreed, 3 (1%) disagreed and 14 (4.8%) neutral. Strongly agreed and agreed formed 269 (92.8%) of the total respondents. It is considered high. This suggests that majority of the respondents considered *halāl* certification/logo as a symbol of *Sharī’ah* compliance.

The results to the statement “Genuine *halāl* food logo reduces food scandal and fraud.” reflect that 97 (33.4%) strongly agreed and 160 (54.8%) agreed. Only 2(0.7%) strongly disagreed, 5 (1.7%) disagreed and 26 (9%) are neutral to the statement. The percentage of the supporters to the statement was 257 (88.2%). This is considered high. Thus, it indicates that many of the respondents believed that food scandal and fraud can be reduced if the logo is genuine and authentic.

Those who submitted to the statement “*Halāl* food certificate guarantees food safety” formed 263 (90.7%) of the respondents. 62 (21.4%) strongly agreed and 201 (69.3%) agreed to the statement. Only 27 (9.3%) of the respondents did not accept the statement. This implied that many among the primary food workers accepted that with *halāl* food certificate and logo on the products they can rely on its safety.

A total of 88 (30.3%) strongly agreed and 172 (59.3%) agreed to the statement “*Halāl* food certificate guarantees healthy food. 1 (0.3%) strongly disagreed, 6 (2.1%) disagreed and 23 (7.9%) neutral. Strongly agreed and agreed formed 260 (89.6%) of the total respondents. It is considered high. This suggests that majority of the respondents considered *halāl* food certification and logo signified that the food is healthy for consumption as it was prepared under strict health *Sharī’ah* regulations.

The results to the statement “*Halāl* food certificate guarantees food quality” demonstrated that 81 (27.9%) strongly agreed and 260 (61.7%) agreed. 3 (1.4%) strongly disagreed, 12 (4.1%) disagreed and 14 (4.8%) are neutral to the statement. The percentage of the supporters to the statement was 89.6%. This is considered high. Thus, it indicates that many of the respondents saw value added in *halāl* food certification.

Also, 92 (31.7%) and 164 (56.6%) of the respondents strongly agreed and agreed that government *halāl* certification agencies, if established, would add value to *halāl* food

product and would influence the consumers towards it. This indicates that 256 (88.3%) of the respondents which forms the majority of the respondents strongly agreed and agreed to the statement “Establishment of government *ḥalāl* certification agencies would influence people to consume *ḥalāl* food.” 5 (1.7%) strongly disagreed, 3 (1.0%) disagreed and 26 (9.0%) neutral. It can be inferred that many primary foods workers were of the opinion that establishment of government *ḥalāl* certification agencies is a potential influencer towards consumption of *ḥalāl* food in South West, Nigeria.

In the Table, it reflects that 66 (22.8%) and 178 (61.4%) which formed 244 (84.2%) of the respondents strongly agreed and agreed that *ḥalāl* food certification provides a comparative advantage over non *ḥalāl* certified food service firms. This formed the majority of the respondents. Only 11 (3.8%) strongly disagreed and 10 (3.4%) disagreed while 25 (8.6%) respondents were neutral in their responses to the item. This indicated that many primary food workers have the right perception of *ḥalāl* food certification.

Those who submitted to the statement “*Ḥalāl* certification/logo signifies that the food is prepared strictly in compliance with *Sharī‘ah*” were 260 (89.6%) of the respondents. Only 30 (10.4%) of the respondents did not accept the statement. This implied that many among the primary food workers agreed that *halāl* certification/logo shows that the food is prepared under strict *Sharī‘ah* compliance.

With the result contained in Table 4.28, it can be concluded that majority of the primary food processors have a high positive perception of *ḥalāl* food certification with average mean of 4.1297. They believed that *ḥalāl* food certification would give them comparative advantage over those who do not obtain it. They believed that *ḥalāl* logo would also attract more patrons to their products and services because the patrons would be convinced that the food is actually processed under strict adherence to Islāmic dietary laws. The Table also confirms that government involvement in *ḥalāl* food certification and issuance of a unique recognised government *ḥalāl* food logo would add to the integrity of *ḥalāl* food products and promote its patronage. This result supports the Malaysian situation where government is in charge of *ḥalāl* certification and control and the influence of Malaysian *ḥalāl* logo issued by JAKIM-government *ḥalāl* certification body in the *ḥalāl* international market.

**4.4.7: Perception of primary food workers of *halāl* food logistics and procurement**

**Table 4.29: Distribution of responses and mean of primary food workers' perception of *halāl* food logistics and procurement (Options: Never necessary- NN, Unnecessary- UN, Necessary-N, Very Necessary- VN, Extremely- Necessary- EN)**

Item	NN	UN	N	VN	EN	Mean	Standard Deviation
Packaging and labeling of <i>halāl</i> food should be in a contamination-free environment.	2 (.7)	6 (2.1)	37 (12.8)	195 (67.2)	50 (17.2)	3.9828	.66788
Training of personnel towards <i>halāl</i> food processing enhances <i>halāl</i> food quality and trust.	1 (.3)	5 (1.7)	32 (11.0)	143 (49.3)	109 (37.6)	4.2207	.73441
<i>Halāl</i> storage facilities will preserve the status of <i>halāl</i> food products.	2 (.7)	11 (3.8)	30 (10.3)	182 (62.8)	65 (22.4)	4.0241	.73666
Muslim workers should be in every critical control point in <i>halāl</i> food production.	2 (.7)	20 (6.9)	27 (9.3)	124 (42.8)	117 (40.3)	4.1517	.90237
Separate equipment should be used for <i>halāl</i> food processing where non- <i>halāl</i> food products are manufactured.	3 (1.0)	17 (5.9)	36 (12.4)	172 (59.3)	62 (21.4)	3.9414	.81509
Effective transportation system enhances <i>halāl</i> food status.	6 (2.1)	8 (2.8)	36 (12.4)	119 (41.0)	121 (41.7)	4.1759	.89989

The Table shows that 2 (0.7%) viewed the statement “Packaging and labeling of *ḥalāl* food should be in a contamination-free environment” as never necessary and 6 (2.1%) viewed it as unnecessary. However, 50 (17.2%) considered the statement as extremely necessary, 195 (67.2%) very necessary and 37 (12.8%) necessary. This formed 282 (97.2%) of the total respondents. It is considered high. This suggests that majority of the respondents submitted that *ḥalāl* food should be packaged and labeled in an environment that is free from cross-contamination with non-*ḥalāl* substance or product.

The results to the statement “Training of personnel towards *ḥalāl* food processing enhances *ḥalāl* food quality and trust” reflect that 109 (37.6%) supported the option Extremely Necessary, 143 (49.3%) Very Necessary and 32 (11%) Necessary. The percentage of the supporters to the statement was 284 (97.9%). This is considered high. Thus, it indicates that many of the respondents submitted that if people are trained in *ḥalāl* food processing it will definitely enhance the quality of the *ḥalāl* food products.

Those who submitted to the statement “*Ḥalāl* storage facilities will preserve the status of *ḥalāl* food products.” formed 277 (95.5%) of the respondents. 13 (4.5%) of the respondents did not accept the statement. This implied that many among the processed food workers accepted that warehouse is dedicated for *ḥalāl* food products it will preserve the status of *ḥalāl* food products.

The statement “Muslim workers should be in every critical control point in *ḥalāl* food production” is supported by 117 (40.3%) Extremely necessary, 124 (42.8%) Very Necessary and 27 (9.3%) Necessary. 1% viewed it 2 (0.7%) Never Necessary and 20 (6.9%) viewed it as Unnecessary. Extremely necessary, Very Necessary and Necessary formed 268 (92.4%) of the total respondents. It is considered high. This suggests that majority of the respondents considered it necessary to have Muslims *ḥalāl* food internal auditors who must be involved in supervising and monitoring *ḥalāl* food production in the *ḥalāl* food industries.

The results to the statement “Separate equipment should be used for *ḥalāl* food processing where non-*ḥalāl* food products are manufactured” demonstrated that 62 (21.4%) Extremely necessary, 172 (59.3%) Very Necessary and 36 (12.4%) Necessary reflected support for the statement. 3 (1%) viewed the statement Never Necessary and

17 (5.9%) viewed it as Unnecessary meaning that they did not support the statement. The percentage of the supporters to the statement was 270 (93.1%). This is considered high. Thus, it indicates that many of the processed food workers deemed it important to have separate equipment for processing *ḥalāl* food where non *ḥalāl* food is produced in the same premises.

Also, the Table depicts that 276 (95.1%) of respondents viewed the statement “effective transportation system enhances *ḥalāl* food status” as 121 (41.7%) viewed it extremely necessary, 119 (41%) very necessary and 36 (12.4) necessary. Only 6 (2.1%) viewed it never necessary and 8 (2.8%) viewed it as unnecessary. It can be inferred that many processed food workers have the right perception of *ḥalāl* food logistics in South West, Nigeria.

The responses of the primary food workers towards to the statements that measure their perception towards *ḥalāl* food logistics and procurement reflect that they considered it very important in *ḥalāl* food business. This is established by the high responses recorded in many of the items such as “training of personnel towards *ḥalāl* food processing enhances *ḥalāl* food quality and trust” 97.9%, “*ḥalāl* storage facilities will preserve the status of *ḥalāl* food products” (95.5%), “separate equipment should be used for *ḥalāl* food processing where non-*ḥalāl* food products are manufactured” 93.1%, and “Muslim workers should be in every critical control point in *ḥalāl* food production” 92.4%. There was an exhibition of high positive perception of primary food workers’ participants towards *ḥalāl* slaughter with an average variable mean of 4.0827.

#### 4.4.8: Knowledge of *ḥalāl* terms possessed by primary food workers

**Table 4.30: Distribution of responses and mean of knowledge of *ḥalāl* terms possessed by primary food workers**

I have knowledge of the following Arabic terms on *ḥalāl* food

Item	Yes	No	Mean	Standard Deviation
<i>Ḥalāl</i>	247(85.2)	43(14.8)	1.1483	.35599
<i>Ḥarām</i>	260(89.7)	30(10.3)	1.1034	.30507
<i>Sunnah</i>	225(77.6)	65(22.4)	1.2241	.41773
<i>Mustahābb</i>	87(30.0)	203(70.0)	1.7000	.45905
<i>Maskrūh</i>	59(20.3)	231(79.7)	1.7966	.40326
<i>Shubhāt</i>	63(21.7)	227(78.3)	1.7828	.41308
<i>Tayyib</i>	88(30.3)	202(69.7)	1.6966	.46054
<i>Ḥalālan Tayyiban</i>	89(30.7)	201(69.7)	1.6931	.46200
<i>Al-khabīthat/al-khabā'ith</i>	43(14.8)	247(85.2)	1.85172	.355988
<i>Dhibḥ</i>	42(14.5)	248(85.5)	1.8551724	.352535264
<i>Dhabīhah</i>	38(13.1)	252(86.9)	1.8690	.33802
<i>Maytatah</i>	65(22.4)	225(77.6)	1.7759	.41773
<i>Al-damm</i>	50(17.2)	240(82.8)	1.8276	.37839
<i>Khinzīr</i>	63(21.7)	227(78.3)	1.7828	.41308
<i>Al-khamr</i>	51(17.6)	239(82.4)	1.8241	.38136
<i>Bahīmah al-an'ām</i>	44(15.2)	246(84.8)	1.8483	.35937



Table 4.30 depicts that only three terms from the group of sixteen Arabic *ḥalāl* terms were understood by the primary food workers. These terms are *ḥalāl*, *ḥarām* and Sunnah. It can be interpreted that the primary food workers did not understand *ḥalāl* food terms in South West, Nigeria. This suggests that the primary food workers need more education on *ḥalāl* related terms. The average variable mean of 1.6737 recorded in testing the level of knowledge of Arabic *ḥalāl* terms reflected that the participants possessed low knowledge of the Arabic terms in *ḥalāl* food industry.

**Table 4.31 Pearson correlation analysis of each of the variables (awareness of *ḥalāl* food (AHF); knowledge of *ḥalāl* food (KHF); knowledge of *ḥalāl* slaughter (KHS); awareness of *ḥalāl* certification (AHC); perception of *Ḥalāl* certification (PHC) and perception of *ḥalāl* logistics (PHL) on perception of *ḥalāl* food (PHF) of the primary food workers**

	Mean	Std Dev	PHF	AHF	KHF	KHS	AHC	PHC	PHL
PHF	33.1621	4.99944	1.0						
AHF	40.1276	6.38561	.603	1.0					
KHF	33.0000	4.61306	.542	.628	1.0				
KHS	41.2034	8.09951	.304	.265	.430	1.0			
AHC	15.1207	5.74329	.121	.214	.048	0.070	1.0		
PHC	33.0379	4.87298	.496	.442	.452	.298	0.077	1.0	
PHL	24.4966	3.50309	.508	.455	.580	.502	0.075	.494	1.0

**Dependent variable:** Perception

All the independent variables reflected significant relationships with the dependent variable (perception of *halāl* food) among primary food workers: Awareness of *halāl* food ( $r = .603, p < 0.05$ ), knowledge of *halāl* food ( $r = .542, p < 0.05$ ); knowledge of *halāl* slaughter ( $r = .304, p < 0.05$ ); awareness of *halāl* certification ( $r = .121, p > 0.05$ ); perception of *halāl* certification ( $r = .496, p < 0.05$ ) also perception of *halāl* logistics have a significant relationship with perception of *halāl* food (PHF) of the primary food workers ( $r = .508, p < 0.05$ ) in the study area. Awareness and knowledge of *halāl* food have significant relationships with the perception of primary food workers. This result is similar to the result recorded on the Muslim consumers. Though, primary food workers comprise both Muslims and other religious faithful, yet, the familiarity of the non-Muslims with some Islamic tenets and rituals cannot be ruled out. This is because Muslims and non-Muslims intermingly live together in the same communities and even same household in the region of the study. Some families consist of Muslims and non-Muslims. This tends to have contributed to the level of their awareness and knowledge of *halāl* food having a positive relationship with their perception of *halāl* food. The result corroborates the results submitted by the previous researchers as referenced in the Muslim consumers' segment above. Similarly the primary food workers possessed a good knowledge of *halāl* slaughter. The knowledge of *halāl* slaughter has positive relationship on their perception of *halāl* food. *Halāl* slaughter is recommended by Allah as a condition that makes the meat of *halāl* animal to be edible for the Muslim consumers as contained in Q2:173 as earlier mentioned. The result indicates that *halāl* logistics plays a significant impact in *halāl* industry as it is considered as a preserver of *halāl* integrity and ensures its safety from post processing contamination with non-*halāl* substances. This influences the consumers to have confidence in *halāl* food products and engenders positive perception of *halāl* food products on the food processors (Talib, et al., 2013, Zulfakar, et al., 2014). This establishes similarity in the outcome of the two studies which observed that *halāl* food supply chain integrity stands and remains the foundation of *halāl* food industry. This study supports their opinions as the result affirms the positive influence of logistics on the perception of primary food workers. With the result from this current work, it is suggested that government and the concerned corporate bodies and individuals who are into food logistics should see *halāl* food logistics as a tool that can promote their businesses. This suggestion matches the recommendations of Zulfakhar, et al., (2014) and Shafie and Othman, (n.d). In their researches, they

suggested that government should put all things in place to enhance *ḥalāl* food supply integrity.

**Table 4.32: Multiple regression analysis on joint contribution of variables on primary food workers' perception of *halāl* food**

Multiple R = 0.686 Multiple R <sup>2</sup> = 0.470 Multiple R <sup>2</sup> (Adjusted) = 0.459 Standard Error of Estimate = 3.67722					
Source of Variance	Sum of Square	Df	Mean of Square	F-Ratio	P
Regression	3396.675	6	566.112	41.866	<0.05
Residual	3826.708	283	13.522		
Total	7223.383	289			

**Dependent Variable:** Perception

#### 4.4.10 Research Question Two

To what extent can awareness of *ḥalāl* food, knowledge of *ḥalāl* food, knowledge of *ḥalāl* slaughter, awareness of *ḥalāl* certification, perception of *ḥalāl* certification and logistics affect the perception of primary food workers of *ḥalāl* food?

The Table above shows that there was joint effect of the independent variables (awareness of *ḥalāl* food (AHF); knowledge of *ḥalāl* food (KHF); knowledge of *ḥalāl* slaughter (KHS); awareness of *ḥalāl* certification (AHC); perception of *ḥalāl* certification (PHC) and perception of *ḥalāl* logistics (PHL) and primary food workers' perception of *ḥalāl* food in the study area ( $R = 0.686$ ,  $p < .05$ ). The combination of the independent variables accounted for 45.9% (adjusted  $R^2 = 0.459$ ) of the total variance in the prediction towards the primary food workers' perception of *ḥalāl* food. The analysis of variance of the multiple regression data yielded an F-ratio value which was found to be significant at 0.05 Alpha level ( $F = 41.866$ ,  $P < 0.05$ ). This shows that the independent variables jointly contributed to primary food workers' perception of *ḥalāl* food.

**Table 4.33: Multiple regression analysis of each of the variables (awareness of *halāl* food (AHF); knowledge of *halāl* food (KHF); knowledge of *halāl* slaughter (KHS); awareness of *halāl* certification (AHC); perception of *halāl* certification (PHC) and perception of *halāl* logistics (PHL) on perception of *halāl* food of the primary food workers**

	Unstandardised Coefficient		Standardised Coefficient	T	Sig.	Remark
	B	Std Error	Beta			Sig.
(Constant)	4.548	1.921		2.368	.019	Sig.
AHF	.280	.046	.357	6.068	.000	Sig.
KHF	.134	.069	.124	.952	.052	Not Sig.
KHS	.008	.032	.012	.237	.813	Not Sig.
AHC	.009	.039	.010	.223	.819	Not Sig.
PHC	.197	.054	.192	3.663	.000	Sig.
PHL	.246	.085	.172	2.898	.004	Sig.

**Dependent Variable:** Perception

The results shown in Table 4.33 reveal that three of the variables contributed to the prediction while three variables were insignificant towards primary food workers' perception in the consumption of *ḥalāl* food in South West, Nigeria. Awareness of *ḥalāl* food is revealed to be a potent contributor to perception of *ḥalāl* food of the primary food workers with ( $\beta = 0.357$ ,  $t = 6.068$ ,  $p < 0.05$ ), this was followed by perception of *ḥalāl* certification ( $\beta = .192$ ,  $t = 3.0663$ ,  $p < 0.05$ ), perception of *ḥalāl* logistics (PHL) ( $\beta = .172$ ,  $t = 2.898$ ,  $p < 0.05$ ). While knowledge of *ḥalāl* food ( $\beta = .124$ ,  $t = .952$ ,  $p > 0.05$ ), knowledge of *ḥalāl* slaughter (KHS) ( $\beta = .012$ ,  $t = .237$ ,  $p > 0.05$ ) and awareness of *ḥalāl* certification (AHC) ( $\beta = .010$ ,  $t = .223$ ,  $p > 0.05$ ) contributed towards perception of *ḥalāl* food of the primary food workers but not significant. The result shows that the null hypothesis was partly accepted.



**Table 4.34: ANOVA Table showing the influence of demographic factors of primary food workers on their awareness, knowledge and perception of *ḥalāl* food Primary/demographic**

		Sum of Square	Df	Mean Square	F	Sig.
Ethnicity* awareness, knowledge and perception	Between Groups	3807.678	3	1269.226	7.203	.000
	Within Groups	50397.991	286	176.217		
	Total	54205.669	289			
Age* awareness, knowledge and perception	Between Groups	3044.985	8	380.623	2.091	.037
	Within Groups	51160.684	281	182.066		
	Total	54205.669	289			
Religion* awareness, knowledge and perception	Between Groups	8063.690	2	4031.845	25.078	.000
	Within Groups	46141.979	287	160.773		
	Total	54205.669				
Level of education* awareness, knowledge and perception	Between Groups	1693.886	4	423.472	2.298	.059
	Within Groups	52511.783	285	184.252		
	Total	54205.669	289			
Section* awareness, knowledge and perception	Between Groups	2480.981	6	413.497	2.262	.038
	Within Groups	51724.688	283	182.773		
	Total	54205.669	289			
Position* awareness, knowledge and perception	Between Groups	3143.780	3	1047.927	5.869	.001
	Within Groups	51061.889	286	178.538		
	Total	54205.669	289			
State* awareness, knowledge and perception	Between Groups	3154.751	5	630.950	3.510	.004
	Within Groups	51050.918	284	179.757		
	Total	54205.669	289			

Result from Table 4.34 shows the influence of demographic factors of primary food workers towards the awareness, knowledge and perception of *halāl* food. The result reveals that there was significant influence of ethnicity on awareness, knowledge and perception of *halāl* food ( $F(3,286) = 7.203, P < 0.05$ ), age also had significant influence ( $F(8, 281) = 2.091, P < 0.05$ ), religion was also significant ( $F(2,287) = 25.078, P < 0.05$ ), level of education was also significant ( $F(4,285) = 2.298, P < 0.05$ ), section was significant ( $F(6,283) = 2.262, P < 0.05$ ), position was significant ( $F(3,286) = 5.869, P < 0.05$ ) as well as state of residence was ( $F(5,284) = 3.510, P < 0.05$ ) among primary food workers. It could be concluded that there was significant influence of demographic factors of primary food workers towards the awareness, knowledge and perception of *halāl* food.

The result of this study affirms the finding of Ibrahim (2012) from her study “The Fast Food Consumption Experiences and Identify Construction of British Muslim: A phenomenological study”, which also revealed that religious identity is more central to British Muslims in their choices for food they eat, meaning that their religion, Islam, has significant influence on their decisions on the choices of food they consumed.

**Table 4.35: ANOVA showing the effect of primary food workers' knowledge of *ḥalāl* food on their perception of *ḥalāl* food certification and logistics**

		Sum of Square	Df	Mean Square	F	Sig.
Knowledge of halal food* perception halal food certification	Between Groups	438.338	7	62.620		.009
	Within Groups	6424.245	282	22.781		
	Total	6862.583	289			
Knowledge of halal food* perception halal food logistics	Between Groups	274.834	7	39.262	3.384	
	Within Groups	3271.663	282	11.602		
	Total	3546.497	289			

Result from Table 4.35 shows the effect of knowledge of *ḥalāl* food on perception of *ḥalāl* food certification among primary food workers. The result reveals that there was a significant effect of *ḥalāl* knowledge on *ḥalāl* food certification ( $F(7,282) = 2.749$ ,  $P < 0.05$ ). This implies that the extent to which knowledge of *ḥalāl* food possessed by primary food workers' affects *ḥalāl* food certification is to a great extent.

Result from the Table also shows the effect of knowledge of *ḥalāl* food on perception of *ḥalāl* food logistics among primary food workers. The result reveals that there is significant effect of *ḥalāl* knowledge on *ḥalāl* food logistics ( $F(7,282) = 3.384$ ,  $P < 0.05$ ). This implies that the extent to which knowledge of *ḥalāl* food possessed by primary food workers' affects *ḥalāl* food logistic is to a great extent.

**H<sub>16</sub>:** There is no significant relationship between demographic profiles and awareness, knowledge and perception of *ḥalāl* food among primary food worker.

**Table 4.36: Correlation matrix showing the relationship between demographic profiles and awareness, knowledge, perception of *ḥalāl* food among primary food workers**

Variables	1	2	3	4	5	6	7	8	9	Mean	SD
awareness, Knowledge and perception of ḥalāl food	1									106.290	13.695
Gender	.066	1								1.5517	.4982
Ethnicity	-.076	-.156**	1							1.1069	.4062
Age	.198**	-.136*	-.090	1						3.4862	1.6243
Religion	-.384**	.308**	-.081	-.151*	1					1.3414	.4822
Level of education	.037	.130*	-.069	-.218**	.261**	1				2.5207	1.002
Section	-.014	.049	.386**	-.141*	-.065	.134*	1			3.2724	1.7759
Position	-.081	.201**	-.087	-.187**	.195**	-.053	-.131*	1		1.5828	.7859
State of residence	.063	.122*	-.112	-.132*	.153**	.090	.152**	.152**	1	3.5310	1.7132

Result from Table 4.36 shows that two independent variables (age and religion) have significant positive and negative relationship with the dependent variable (awareness, knowledge and perception). Age is significant:  $r(288) = .198, p < 0.05$ , and religion:  $r(288) = -.384, p < 0.05$ . While gender,  $r(288) = -0.066, p > 0.05$ , ethnicity  $r(288) = -0.076, p > 0.05$ , level of education  $r(288) = -0.037, p > 0.05$ , section  $r(288) = -0.014, p > 0.05$ , and state of residence  $r(288) = -0.063, p > 0.05$  do not have significant relationship with awareness, knowledge and perception of *halāl* food among primary food worker. Thus, the hypothesis is significantly accepted.

**H:** There is no significant relationship between *ḥalāl* knowledge and awareness, knowledge and perception of *ḥalāl* food.

**Table 4.37: Showing the relationship between *ḥalāl* knowledge and awareness, knowledge, perception of *ḥalāl* food.**

Variables	Mean	Std. Dev	N	Df	R	P	Remark
<i>Ḥalāl</i> knowledge	4.4552	1.35156	290	288	-	0.789	Not. sig.
Awareness, knowledge and perception	106.2897	13.69536					

Result from Table 4.37 shows that there is no significant relationship between *ḥalāl* knowledge and awareness, knowledge, perception of *ḥalāl* food among primary food workers in South West, Nigeria ( $r = -.016$ ;  $p > 0.05$ ). This implies that *ḥalāl* knowledge does not influence awareness, knowledge and perception of *ḥalāl* food among primary food workers. Hence, the null hypothesis is accepted.



**H: There is no significant relationship between *ḥalāl* knowledge and *ḥalāl* certification among primary food workers.**

**Table 4.38: Showing the relationship between *ḥalāl* knowledge and *ḥalāl* certification among primary food workers**

Variables	Mean	Std. Dev	N	Df	R	P	Remark
<i>Ḥalāl</i> knowledge	4.4552	1.35156	290	288	-.086	.146	Not. sig.
<i>Ḥalāl</i> Certification	33.0379	4.87298					

Result from the Table above shows that there was no significant relationship between *ḥalāl* knowledge and certification among primary food workers in South West Nigeria ( $r = -.086$ ;  $p > 0.05$ ). This implies that *ḥalāl* knowledge did not influence *ḥalāl* certification among primary food workers. Hence, the null hypothesis is accepted.

**H:** There is no significant relationship between *ḥalāl* knowledge and logistics among primary food workers

**Table 4.39: Showing the relationship between *ḥalāl* knowledge and logistics among primary food workers**

Variables	Mean	Std. Dev	N	Df	R	P	Remark
Ḥalāl knowledge	4.4552	1.35156	290	288	.031	.599	Not. sig.
Logistics	24.4966	3.50309					

Result from the Table above shows that there is no significant relationship between *ḥalāl* knowledge and logistics among primary food workers in South West Nigeria ( $r = .031$ ;  $p > 0.05$ ). This implies that *ḥalāl* knowledge did not influence *ḥalāl* logistics. Hence, the hypothesis is accepted.

#### 4.4.11 Unit summary of discussion

This unit answers research question two. As contained in Table 4.32, the study reveals that there was a positive significant influence of awareness of *ḥalāl* food, knowledge of *ḥalāl* food, awareness of *ḥalāl* slaughter, awareness of *ḥalāl* certification, perception of *ḥalāl* certification and logistics on the perception of primary food workers of *ḥalāl* food. Thus, objective two of the research was achieved. Further more, the study reveals that many among the primary food workers are aware of *ḥalāl* food and possessed good knowledge of it. It reveals that the primary food workers have positive perception towards *ḥalāl* food. However, the result shows that many of the primary food workers have a low knowledge of *ḥalāl* slaughter. Very few of the primary food workers were aware of *ḥalāl* food certification and certification bodies but they exhibited a positive and right perception of its significance in *ḥalāl* food production and acknowledged the significance of government involvement in *ḥalāl* food certification and unique *ḥalāl* logo to maintain and sustain *ḥalāl* food confidence, trust and integrity. *Ḥalāl* food logistics and procurement received great receptivity among the primary food workers; meaning that they accepted that there must be *ḥalāl* food logistics services available at all time for solid reliance on the integrity of the product. The result indicates that majority of the primary food workers were not familiar with and did not understand many Arabic terms related to *ḥalāl* food. Further results reveal that there was a significant influence of demographic factors of primary food workers towards awareness, knowledge and perception of *ḥalāl* food. Only gender is not significant. *Ḥalāl* knowledge is found significant on perception of primary food workers towards *ḥalāl* food certification. The results also indicate that there was a significant influence of *ḥalāl* knowledge on the perception of primary food workers of *ḥalāl* food logistics and procurement.

The result of the hypothesis contained in Table 4.36 reveals that there was a significant relationship between awareness, perception of *ḥalāl* certification and logistics and perception of primary food workers of *ḥalāl* food. Table 4.37 depicts that age and religion have significant relationships while gender, ethnicity, level of education, section and state of residence do not have significant relationships with awareness, knowledge and perception of *ḥalāl* food among primary food worker significantly accepting the hypothesis. Table 4.4.17 depicts that there was no significant relationship between source of *ḥalāl* knowledge and awareness, knowledge, perception

of *ḥalāl* food among primary food workers on *ḥalāl* food products in South West, Nigeria ( $r = -.016$ ;  $p > 0.05$ ), thus, the hypothesis is accepted. It is also shown in Table 4.38 that there is no significant relationship between *ḥalāl* knowledge and certification among primary food workers in South West Nigeria ( $r = -.086$ ;  $p > 0.05$ ), thus, the hypothesis was accepted. Table 4.39 depicts that there was no significant relationship between *ḥalāl* knowledge and logistics among primary food workers *ḥalāl* food products in South West, Nigeria ( $r = .031$ ;  $p > 0.05$ ) thus, the hypothesis was accepted.

#### 4.5.1 Awareness of *halāl* food among processed food workers

**Table 4.40: Distribution of responses of processed food workers on their awareness of *halāl* food**

Item	SD	D	N	A	SA	Mean	Standard Deviation
I am aware of <i>halāl</i> food as recommended food for Muslim consumption.	5(2.9)	9(5.1)	4(2.3)	109(62.3)	48 (27.4)	4.0629	.87201
This firm produces <i>halāl</i> food in compliance with <i>Sharī'ah</i> .	1 (.6)	7 (4.0)	7 (4.0)	84 (48.0)	76 (43.4)	4.2971	.77515
This firm ensures that the environment fulfils/ meets up with <i>halāl</i> food processing guidelines.	1 (.6)	5 (2.9)	2 (1.1)	110 (62.9)	57 (32.6)	4.2400	.66919
This firm observes HACCPs (Hazard Critical Control Points) in the food processing.	5 (2.9)	4 (2.3)	10 (5.7)	83 (47.4)	73 (41.7)	4.2286	.88036
The firm uses separate equipment for <i>halāl</i> food where the firm produces non- <i>halāl</i> food.	3 (1.7)	10 (5.7)	7 (4.0)	105 (60.0)	50 (28.6)	4.0800	.84036
I am aware of non- <i>halāl</i> food.	3 (1.7)	10 (5.7)	4 (2.3)	95 (54.3)	63 (36.0)	4.1714	.86056
The firm is certified by standard <i>halāl</i> certification body.	13 (1.7)	7 (4.0)	29 (16.6)	86 (49.1)	40 (22.9)	3.7600	1.08257
I am aware of	35	47	31	39	23	2.8171	1.33939

<i>ḥalāl</i> promotions	(20.0)	(26.9)	(17.7)	(22.3)	(13.1)		
I am aware of <i>ḥalāl</i> food festivals	50 (28.6)	61 (34.9)	25 (14.3)	28 (16.0)	11 (6.3)	2.3657	1.22848
I am aware of <i>ḥalāl</i> food market	19 (10.9)	21 (12%)	38 (21.7%)	64 (36.6%)	33 (18.9%)	3.4057	1.23222
I am aware of economic advantages of <i>ḥalāl</i> food production	9 (5.1)	37 (21.1)	48 (27.4)	45 (25.7)	36 (20.6)	3.3543	1.17452



The Table indicates that majority of the respondents 157 (89.7%) strongly agreed 48 (27.4%) and agreed 109 (62.3%) that they were aware of *ḥalāl* food. 5 (2.9%) strongly disagreed, 9 (5.1%) disagreed and 4 (2.3%) neutral showed that they were not aware that *ḥalāl* food is recommended food for Muslim consumption. In general, many processed food workers were aware of *ḥalāl* food as Islāmic doctrine.

In the Table, it reflects that 76 (43.4%) and 84 (48%) which indicates 160 (91.4%) of the respondents strongly agreed and agreed that their firms produce food in compliance with *Sharī'ah*. This formed the majority of the respondents. Only 1 (0.6%) strongly disagreed and 7 (4%) disagreed that their firms produce food in compliance with *Sharī'ah* while 7 (4%) respondents were neutral in their responses to the term. This implies that majority of the processed food workers were aware of *ḥalāl* food.

Also, 57 (32.6%) and 110 (62.9%) of the respondents agreed and strongly agreed that their firms ensure that their environments fulfil/meet up with *ḥalāl* food processing guidelines. This indicates that 167 (95.4%) of the respondents which forms the majority of the respondents strongly agreed and agreed to the item. Only 8 (4.5%) strongly disagreed, disagreed and neutral that their firms ensure that the environments fulfil/ meet up with *ḥalāl* food processing guidelines. It can be inferred that majority of the processed food workers in South West, Nigeria testified that firm ensures that the environment meets up with *ḥalāl* food processing guidelines.

The Table shows that 156 (89.1%) strongly agreed 73 (41.7%) and agreed 83 (47.4%) that their firms observe HACCPs (Hazard Critical Control Points) in the food processing while 19 (10.9%) did not support the statement as 5 (2.9%) strongly disagreed, 4 (2.3%) disagreed and 10 (5.7%) were neutral to the statement “This firm observes HACCPs (Hazard Critical Control Points) in the food processing..” The result indicates that many among the processed food workers observed HACCPs in processing their food products in the area.

The result from this Table indicates that processed food workers in South West, Nigeria agreed that their firms used separate equipment for *ḥalāl* food where the firms produce non-*ḥalāl* food. The Table depicts that 50 (28.6%) and 105 (60%) strongly agreed and agreed to the statement “their firm uses separate equipment for *ḥalāl* food as the firm produces non-*ḥalāl* food” respectively. This formed 155 (88.6%) of the respondents and represented the majority. The result indicates that many among the

processed food workers were aware that separate equipment should be used for *ḥalāl* food production where non-*ḥalāl* food product is produced to maintain the trust and integrity of the *ḥalāl* food status.

The result from this Table indicates that processed food workers in the South West, Nigeria were aware of non-*ḥalāl* food as 158 (90.3%) of the respondents supported the statement “I am aware of non-*ḥalāl* food.” The responses indicate that 63 (36%) and 95 (54.3%) of the respondents strongly agreed and agreed to the statement respectively. The result formed 158 (90.3%) of the respondents. It could be interpreted that many of the processed food workers could identify non-*ḥalāl* food from *ḥalāl* food.

Also, the Table shows that 126 (72%) of the respondents agreed that their firms were certified by standard *ḥalāl* certification body as 40 (22.9%) strongly agreed and 86 (49.1%) agreed to the statement “The firm is certified by standard *ḥalāl* certification body.” Only 13 (7.4%) strongly disagreed, 7 (4%) disagreed and 29 (16.6%) were neutral. Thus, it can be inferred that processed food workers in South West Nigeria were acquainted with *ḥalāl* food.

The Table depicts that most processed food workers were not aware of *ḥalāl* promotions in South West, Nigeria as 62 (35.4%) of the respondents claimed that they were aware of *ḥalāl* promotions. However, 35 (20%) strongly disagreed, 47 (26.9%) disagreed and 31 (17.7%) neutral were not aware of *ḥalāl* promotions. It can thus be generalised that most processed food workers in South West, Nigeria were not aware of *ḥalāl* food promotions.

The Table reveals that 11 (6.3%) of the respondents strongly agreed and 28 (16%) agreed to the statement “I am aware of *ḥalāl* food festivals.” This formed 39 (22.3%) of total respondents. However, 50 (28.6%) strongly disagreed 61 (34.9%) disagreed and 25 (14.3%) were neutral to the statement. They totaled 136 (77.8). This Reaction suggests that majority of the processed food workers were not aware of *ḥalāl* festivals.

In the Table, it shows that 97 (55.5%) of the respondent testified to the statement “I am aware of *ḥalāl* food market” as 33 (18.9%) strongly agreed and 64 (36.6%) agreed to the statement. However, 19 (10.9%) strongly disagreed, 21 (12%) disagreed and 38

(21.7%) stayed neutral that they were not aware. This suggests that there are many processed food workers who are not aware of *ḥalāl* food market.

In the Table, it shows that 81 (46.3%) of the respondent testified to the statement “I am aware of economic advantages of *ḥalāl* food production” as 36 (20.6) strongly agreed and 45 (25.7%) agreed to the statement. However, 9 (5.1%) strongly disagreed, 37 (21.1%) disagreed and 48 (27.4%) stayed neutral that they were not aware of economic advantages of *ḥalāl* food production. This suggests that there was little awareness of *ḥalāl* food economic advantages among the processed food workers.

It could be conclude that though, many processed food workers were aware of *ḥalāl* food with an average variable mean of 3.7075, yet, many of them were not aware of *ḥalāl* promotions, festivals, *ḥalāl* market and economic advantages of *ḥalāl* food production.

#### 4.5.2 Knowledge of processed food workers of *ḥalāl* food

**Table: 4.41 Descriptive statistics of knowledge of processed food workers of *ḥalāl* food**

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Standard Deviation
<i>Ḥalāl</i> food is the only lawful food for Muslims.	8 (4.6)	6 (3.4)	1 (.6)	110 (62.9)	50 (28.6)	4.0743	.91612
Alcohol and its products are unlawful for Muslim consumption	7 (4.0)	1 (.6)	2 (1.1)	90 (51.4)	75 (42.9)	4.2857	.86341
Animal that is not slaughtered and its products are unlawful for Muslim consumption.	9 (5.1)	3 (1.7)	3 (1.7)	104 (59.4)	56 (32.0)	4.1143	.92759
Animal that Allāh's name is not invoked when slaughtered and its products are not lawful for Muslim consumption	3 (1.7)	3 (1.7)	11 (6.3)	86 (49.1)	72 (41.1)	4.2629	.79477
<i>Ḥalāl</i> food should be prepared using separate utensils	2 (1.1)	3 (1.7)	5 (2.9)	109 (62.3)	56 (32.0)	4.2229	.68778
<i>Ḥalāl</i> food should be separately stored from non <i>ḥalāl</i> food	4 (2.3)		6 (3.4)	96 (54.9)	69 (39.4)	4.2914	.74331
Muslim slaughterer must slaughter	3 (1.7)	2 (1.1)	12 (6.9)	94 (53.7)	64 (36.6)	4.2229	.76680

animal for Muslim consumption							
Ingredients from non <i>ḥalāl</i> source make the food products to become unlawful for Muslim consumption	3 (1.7)	4 (2.3)	10 (5.7)	88 (50.3)	70 (40.0)	4.2457	.80385
<i>Ḥalāl</i> food is beneficial to only Muslims	27 (15.4)	25 (14.3)	8 (4.6)	84 (48.0)	31 (17.7)	3.3829	1.34623
Any worker who has direct contact with materials, ingredients or equipments used in the preparation of <i>ḥalāl</i> food must be free from communicable diseases	3 (1.7)	4 (2.3)	5 (2.9)	99 (56.6)	64 (36.6)	4.2914	.69538
The employee must ensure that the suppliers of ingredients have knowledge of <i>ḥalāl</i> food requisites.	1 (.6)	5 (2.9)	3 (1.7)	9 (56.6)	67 (38.3)	4.2914	.69538

The respondents demonstrated their knowledge of *ḥalāl* food concept as majority of them agreed to the statement “*ḥalāl* food is the only lawful food for Muslims” with 160 (91.5%) as strongly agreed 50 (28.6%) and agreed 110 (62.9%) to the statement. Only 1 (.6%) neutral, 6 (3.4%) disagreed and 8 (4.6%) strongly disagreed. The strongly agreed and agreed is considered high and thus, suggests that processed food workers in South West, Nigeria understood that *ḥalāl* food is the only lawful food for Muslims.

The participants showed their knowledge of *ḥalāl* food with 75 (42.9%) strongly agreed and 90 (51.4%) agreed. This formed 165 (94.3%) of the respondents. They agreed to the statement “Alcohol and its products are unlawful for Muslim consumption.” Only 7 (4%) strongly disagreed, 1 (0.6%) disagreed and 2 (1.1%) neutral. This could be interpreted that the processed food workers understood that alcohol is prohibited for Muslim consumption.

Majority of the participants attested to the statement “animal that is not slaughtered and its products are unlawful for Muslim consumption” with 56 (32%) strongly agreed and 104 (59.4%) agreed. This formed the majority of the respondents 160 (91.4%). It can be inferred that processed food workers understood that animal should be slaughtered in Islāmic way for Muslim consumption.

It is depicted in the Table that 72 (41.1%) strongly agreed and 86 (49.1%) agreed to the statement “animal that Allāh’s name is not invoked when slaughtered and its products are not lawful for Muslim consumption.” This formed 158 (90.2%) of the respondents and considered high. Only 11 (6.3%) were neutral, 3 (1.7%) disagreed and 3 (1.7%) strongly disagreed. This formed 17 (9.7%). The result implies that majority of the processed food workers understand it as a requisite that Allāh’s name must be invoked on the animal when slaughtered to make it *ḥalāl* for Muslim consumption.

It was displayed by processed food workers that *ḥalāl* food should be prepared using separate utensils. This is depicted by their responses to the item as 165 (94.3%) of the respondents strongly agreed 56 (32%) and agreed 109 (62.3%) to the statement. The result suggests that many among the processed food workers in South West, Nigeria knew that when utensils used to prepare non-*ḥalāl* food is also used to prepare *ḥalāl* food, the *ḥalāl* food is no longer *ḥalāl* and thus, has become *ḥarām* for the Muslim consumption.

Knowledge of processed food workers on *ḥalāl* food is depicted with the responses of the participants to the item “*ḥalāl* food should be separately stored from non *ḥalāl* food.” The Table depicts that 165 (94.3%) supported the statement while 10 (5.7%) did not support. This reflects some level of knowledge of *ḥalāl* food among the processed food workers.

The Table depicts that 158 (90.3%) subscribed to the statement “Muslim slaughterer must slaughter animal for Muslim consumption” with 64 (36.6%) strongly agreed and 94 (53.7%) agreed to the statement. only 12 (6.9%) neutral, 2 (1.1%) disagreed and 3 (1.7%) strongly disagreed. The strongly agreed and agreed is considered high and thus, suggests that processed food workers in South West Nigeria understood that *ḥalāl* animal must be slaughtered according to Islāmic guidelines.

The participants showed their knowledge of *ḥalāl* food with 70 (40%) strongly agreed and 88 (50.3%) agreed. This formed 158 (90.3%) of the respondents. They agreed to the statement “ingredients from non *ḥalāl* source make the food products to become unlawful for Muslim consumption.” Only (1.7%) strongly disagreed, 4 (2.3%) disagreed and 10 (5.7%) were neutral. It can be interpreted that the processed food workers understood that if non-*ḥalāl* ingredient is used to prepare *ḥalāl* food, it makes *ḥalāl* food to become *ḥarām* for Muslims.

The statement “*ḥalāl* food is beneficial to only Muslims” was subscribed to by 115 (65.7%) of the respondents as 31 (17.7%) strongly agreed and 84 (48%) agreed. Only 8 (4.6%) were neutral, 25 (14.3%) disagreed and 27 (15.4%) strongly disagreed which was 60 (34.3%) of the respondents. The strongly agreed and agreed is considered high and thus, suggests that many among the processed food workers in South West, Nigeria agreed that *ḥalāl* food is beneficial to Muslims and non-Muslims.

It was demonstrated by the respondents that they have some knowledge of *ḥalāl* food concept as 163 (93.2%) subscribed to the statement “any worker who has direct contact with materials, ingredients or equipments used in the preparation of *ḥalāl* food must be free from communicable diseases.” Only 5 (2.9%) were neutral, 4 (2.3%) disagreed and 3 (1.7%) strongly disagreed to the statement. The strongly agreed and agreed is considered high and thus, suggests that processed food workers in South West Nigeria understood that *ḥalāl* food workers must not suffer from any communicable diseases to avoid contamination with the food.

Knowledge of *ḥalāl* food concept was demonstrated by the respondents as 67 (38.3%) strongly agreed and 99 (56.6%) agreed to the statement “the employee must ensure that the suppliers of ingredients have knowledge of *ḥalāl* food requisites.” This formed 166 (94.9%) of the respondents. Only 3 (1.7%) were neutral, 5 (2.9%) disagreed and 1 (0.6%) strongly disagreed. The strongly agreed and agreed is considered high and thus, suggests that processed food workers in South West, Nigeria understand that the suppliers of ingredients used to prepare *ḥalāl* food should possess some knowledge of *ḥalāl* food phenomenon.

The result from this Table shows that majority of the processed food workers possessed good level of knowledge of *ḥalāl* food regulations. It is depicted in the result that the processed food workers understand that any *ḥalāl* animal must be slaughtered in Islāmic way; and the name of Allāh must be pronounced when it is slaughtered to be edible for Muslims. They identified alcohol and its products as *ḥarām* for Muslim consumption as well. They agreed that if non-*ḥalāl* ingredient is used to prepare *ḥalāl* food, the food automatically becomes *ḥarām* for Muslim consumption. Thus, it could be concluded with the average mean of 4.1486 that the processed food workers have a high knowledge of *ḥalāl* food concept.



#### 4.5.3 Perception of processed food workers of *halāl* food

#### 4.42 Distribution of responses and mean of perception of processed food workers of *halāl* food

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Standard Deviation
<i>Halāl</i> food is spiritual for Muslims.		3 (1.7)	8 (4.6)	120 (68.6)	44 (25.1)	4.1714	.58160
<i>Halāl</i> food is compulsory for Muslims.	1 (.6)	1 (.6)	1 (.6)	78 (44.6)	94 (53.7)	4.5029	.60529
There is health benefit in consuming <i>halāl</i> food.	4 (2.3)	1 (.6)	8 (4.6)	115 (65.7)	47 (26.9)	4.1429	.72488
<i>Halāl</i> food benefits both Muslims and non Muslims.	2 (1.1)		8 (4.6)	95 (54.3)	70 (40.0)	4.3200	.66988
<i>Halāl</i> food is hygienic.	2 (1.1)	2 (1.1)	5 (2.9)	110 (62.9)	56 (32.0)	4.2343	.66693
<i>Halāl</i> food is tastier.		2 (1.1)	9 (5.1)	92 (52.6)	73 (41.1)	4.3371	.63022
<i>Halāl</i> food is safe		1 (.6)	2 (1.1)	101 (57.7)	71 (40.6)	4.3829	.54324
<i>Halāl</i> food is clean		3 (1.7)	1 (.6)	106 (60.6)	65 (37.1)	4.3314	.58121
Using detection and screening devices guarantee <i>halāl</i> food status.	5 (2.9)	1 (.6)	7 (4.0)	94 (53.7)	68 (38.9)	4.2514	.86565

It is shown in the Table above that 44 (25.1%) strongly agreed and 120 (68.6%) agreed to the statement “*halāl* food is spiritual for Muslims.” Only 3 (1.7%) disagreed and 8 (4.6%) were neutral. Strongly agreed and agreed formed 164 (93.7%) of the total respondents. It is considered high. This suggests that majority of the processed food workers considered *halāl* food as spiritual for Muslims.

The results to the statement “*halāl* food is compulsory for Muslims” reflect that 94 (53.7%) strongly agreed and 78 (44%) agreed. Only 1 (0.6%) strongly disagreed, 1 (0.6%) disagreed and 1 (0.6%) was neutral to the statement. The percentage of the supporters to the statement was 97.7%. This is considered high. Thus, it indicates that many of the respondents accepted that *halāl* food is compulsory for Muslims.

Those who submitted to the statement “there is health benefit in consuming *halāl* food” formed 162 (92.6%) of the respondents. Only 13 (7.4%) of the respondents did not accept the statement. This implied that many among the processed food workers accepted that there are special health benefits of *halāl* food over non-*halāl* food.

It reflects in the Table that 70 (40%) strongly agreed and 95 (54.3%) agreed to the statement “*halāl* food benefits both Muslims and non Muslims.” Only 2 (1.1%) strongly disagreed and 8 (4.6%) were neutral. Strongly agreed and agreed formed 165 (94.3%) of the total respondents. It is considered high. This suggests that majority of the respondents considered *halāl* food as beneficial not only to Muslims but also non-Muslims.

The results to the statement “*halāl* food is hygienic” demonstrated that 56 (32%) strongly agreed and 110 (62.9%) agreed. Only 2 (1.1%) strongly disagreed, 2 (1.1%) disagreed and 5 (2.9%) were neutral to the statement. The percentage of the supporters to the statement was 166 (94.9%). This is considered high. Thus, it indicates that many of the respondents affirmed that *halāl* food is hygienic.

Also, 72 (41%) and 92 (52.6%) of the respondents strongly agreed and agreed that *halāl* food is tastier. This indicates that 164 (93.6%) of the respondents which forms the majority of the respondents strongly agreed and agreed to the statement “*halāl* food is tastier.” Only 2 (1.1%) disagreed and 9 (5.1%) were neutral. It can be inferred that many processed food workers saw *halāl* food as tastier than non-*halāl* food and corroborates the concept of *halālan tayyiban*.

In the Table, it reflects that 71 (40.6%) and 101 (57.7%) which formed 172 (97.7%) of the respondents strongly agreed and agreed that *ḥalāl* food guarantees food safety. This formed the majority of the respondents. 1 (0.6%) disagreed while 2 (1.1%) respondents were neutral in their responses to the item. This indicated that many processed food workers considered *ḥalāl* food as food that is safe for consumption. This corroborates the concept of *ḥalālan tayyiban*.

Those who submitted to the statement “*Ḥalāl* food is clean” were 171 (97.7%) of the respondents. Only 4 (2.3%) of the respondents did not accept the statement. This implied that many among the processed food workers agreed that *ḥalāl* food is clean. This goes with the concept of *ḥalālan tayyiban*.

Also, 68 (38.9%) and 94 (53.7%) of the respondents strongly agreed and agreed that using detection and screening devices guarantees *ḥalāl* food status. This indicates that 162 (92.6%) of the respondents which forms the majority of the respondents strongly agreed and agreed to the statement “using detection and screening devices guarantees *ḥalāl* food status.” Only 5 (2.9%) strongly disagreed, 1 (0.6%) disagreed and 7 (4%) were neutral to the statement.

Table 4.42 shows high percentage of positive responses to many of the items used to measure the perception of the processed food workers towards *ḥalāl* food. Thus, it could be inferred that the processed food workers possessed positive perception of *ḥalāl* food concept as they considered *ḥalāl* food as spiritual and compulsory for Muslims to consume. The processed food workers accepted that *ḥalāl* food is hygienic, tastier and safer to consume than non-*ḥalāl* food. The processed food workers agreed that *ḥalāl* food is not only beneficial to Muslim but also to non-Muslim consumers. The results from the Table reflected that the participants, with an average mean of 4.2971, had a high positive perception towards *ḥalāl* food.

#### 4.5.4: Perception of processed food workers of *halāl* food certification

**Table 4.43 Distribution of responses and mean of perception of processed food workers of *halāl* food certification**

I perceive that *halāl* certification will...

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Standard Deviation
Reduce food fraud	3 (1.7)	4 (2.3)	4 (2.3)	118 (67.4)	46 (26.3)	4.1429	.71691
Make the firm produce <i>halāl</i> food in compliance with Shari'ah.	2 (1.1)	1 (.6)	4 (2.3)	101 (57.7)	67 (38.3)	4.3143	.65965
Make the firm to ensure that it provides environment that fulfils/meets up with <i>halāl</i> food processing guidelines.			8 (4.6)	112 (64.0)	55 (31.4)	4.2686	.53807
Encourage the firm observe HACCPs in the food processing.	2 (1.1)	5 (2.9)	11 (6.3)	100 (57.1)	57 (32.6)	4.1714	.76134
Make the firm to use separate equipment for <i>halāl</i> food where the firm produces non- <i>halāl</i> food.	2 (1.1)	6 (3.4)	9 (5.1)	95 (54.3)	63 (36.0)	4.2057	.78269
Guarantee that the <i>halāl</i> logo of the firm is authentic		3 (1.7)	6 (3.4)	93 (53.1)	73 (41.7)	4.3486	.63308
Promote the firm's sales	5 (2.9)	3 (1.7)	7 (4.0)	91 (52.0)	69 (39.4)	4.2343	.84212

<i>Halāl</i> certification can hike the prices of the products as well.	3 (1.7)	1 (.6)	8 (4.6)	88 (50.3)	75 (42.9)	4.3200	.74309
<i>Halāl</i> certification can encourage the firm to become an exporter of <i>ḥalāl</i> food	1 (.6)	5 (2.9)	7 (4.0)	96 (54.9)	66 (37.7)	4.2629	.71883
Enhances quality of life of the consumers.	4 (2.3)	1 (.6)	10 (5.7)	91 (52.0)	69 (39.4)	4.2571	.78575
Guarantees traceability of <i>ḥalāl</i> food certificate.	2 (1.1)	3 (1.7)	6 (3.4)	87 (49.7)	77 (44.0)	4.3371	.73151

Table 4.43 depicts that 46 (26.3%) strongly agreed and 118 (67.4%) agreed to the statement “*Halāl* food certificate will reduce food fraud.” Only 3 (1.7%) strongly disagreed, 4 (2.3%) disagreed and 4 (2.3%) were neutral. Strongly agreed and agreed formed 89.6% of the total respondents. It is considered high. This suggests that majority of the respondents supported that *halāl* food certificate will reduce food fraud.

The result to the statement “*halāl* food certificate will make the firm to produce *halāl* food in compliance with *Sharī’ah*” reflects that 67 (38.3%) strongly agreed and 101 (57.7%) agreed. Only 2 (1.1%) strongly disagreed, 1 (0.6%) disagreed and 4 (2.3%) are neutral to the statement. The percentage of the supporters to the statement was 168 (96%). This can be considered high. Thus, it indicates that many of the respondents believed that *halāl* food certificate will make food firms to produce *halāl* food in compliance with *Sharī’ah*.

Those who submitted to the statement “*Halāl* food certificate will make the firm to ensure that it provides environment that meets up with *halāl* food processing guidelines” formed 95.4% of the respondents. Only 4.6% of the respondents did not accept the statement. This implied that many among the processed food workers accepted that with *halāl* food certificate and logo on the products they can rely on its cleanliness and safety.

The Table depicts that 32.6% strongly agreed and 57.1% agreed to the statement “*Halāl* food certificate will encourage the firm to observe HACCPs in the food processing.” Only 1.1% strongly disagreed, 2.9% disagreed and 6.3% was neutral. Strongly agreed and agreed formed 89.7% of the total respondents. It is considered high. The result shows that *halāl* certification will make food firms to observe HACCPs when they process *halāl* food.

The results to the statement “*Halāl* food certificate will make the firm to use separate equipment for *halāl* food where the firm produces non- *halāl* food.” demonstrated that 36% strongly agreed and 54.3% agreed. Only 1.1% strongly disagreed, 3.4% disagreed and 5.1% was neutral to the statement. The percentage of the supporters to the statement was 83.4%. This is considered high. Thus, it indicates that many of the respondents agreed that *halāl* certificate will make the firm to use separate equipment for *halāl* food where the firm produces non-*halāl* food.

Also, 41.7% and 53.1% of the respondents strongly agreed and agreed that *ḥalāl* certificate guarantees that the *ḥalāl* logo of the firm is authentic. This indicates that 94.8% of the respondents which formed the majority of the respondents strongly agreed and agreed to the statement “*Ḥalāl* certificate guarantees that the *ḥalāl* logo of the firm is authentic.” Only 1.7% disagreed and 3.4% was neutral. It can be inferred that many processed food workers were of the opinion that *ḥalāl* certificate guarantees that the *ḥalāl* logo of the firm is authentic.

In the Table, it reflects that 39.4% and 52% which formed 91.4% of the respondents strongly agreed and agreed that *ḥalāl* food certificate would promote the firm’s sales. This formed the majority of the respondents. Only 2.9% strongly disagreed and 1.7% disagreed while 4.0% respondents was neutral to the item. This indicates that many processed food workers perceived *ḥalāl* food certification as a promoter of sales for any firm which is *ḥalāl* certified by a recognised *ḥalāl* certification agency.

Those who submitted to the statement “*Ḥalāl* certification can hike the prices of the products as well” were 163 (93.1%) of the respondents as 75 (42.9%) strongly agreed and 88 (50.3%) agreed. Only 12 (6.9%) of the respondents did not accept the statement. This implies that many among the processed food workers agreed that cost of *ḥalāl* certification/logo can hike the prices of the products.

In the Table above, it reflects that 37.7% and 54.9% which formed 92.6% of the respondents strongly agreed and agreed that *ḥalāl* certification can encourage the firm to become an exporter of *ḥalāl* food. This formed the majority of the respondents. Only 0.6% strongly disagreed and 2.9% disagreed while 4.0% respondents were neutral in their responses to the item. This indicates that many processed food workers have the right perception towards *ḥalāl* food certification.

Those who submitted to the statement “*Ḥalāl* food certificate enhances quality of life of the consumer” were 160 (91.4%) of the respondents. Only 15 (8.6%) of the respondents did not accept the statement. This implies that many among the processed food workers agreed that *ḥalāl* certification/logo *ḥalāl* food certificate enhances quality of life of the consumers.

Those who submitted to the statement “*Ḥalāl* food certificates guarantees traceability of *ḥalāl* food certificates” were 164 (93.7%) of the respondents. Only 11 (6.2%) of the

respondents did not accept the statement. This implies that many among the processed food workers agreed that *ḥalāl* certification/logo shows that the food is prepared under strict *Sharī'ah* compliance.

Table 4.43 shows high percentage of positive responses to many of the items used to measure the perception of the processed food workers of *ḥalāl* food certification. This result was confirmed with the average variable mean of 4.2603. Thus, it can be concluded that the processed food workers in South West, Nigeria possessed positive perception towards *ḥalāl* food certification. They considered *ḥalāl* food certification as instrumental towards the originality, sustainability and maintenance of *ḥalāl* food production.



#### 4.5.5 Processed food workers' perception of *halāl* food logo

**Table 4.44: Distribution of responses of processed food workers' perception of *halāl* food logo (N= 175)**

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Standard Deviation
<i>Halāl</i> logo provides assurance of <i>halāl</i> food compliant products.	4 (2.3)	2 (1.1)	5 (2.9)	113 (64.6)	51 (29.1)	4.1714	.73835
Government certified <i>halāl</i> logo will reduce doubt on <i>halāl</i> logos in the market.	3 (1.7)	6 (3.4)	2 (1.1)	91 (52.0)	73 (41.7)	4.2857	.80127
<i>Halāl</i> logo generates awareness on <i>halāl</i> food consumption.	1 (.6)	1 (.6)	7 (4.0)	116 (66.3)	50 (28.6)	4.2171	.59572
<i>Halāl</i> logo guarantees that the food is authentic <i>halāl</i> .		2 (1.1)	10 (5.7)	99 (56.6)	64 (36.6)	4.2857	.62383
A unique and single logo for Nigeria guarantees the originality of <i>halāl</i> logo in the market.	4 (2.3)	9 (5.1)	5 (2.9)	108 (61.7)	49 (28.0)	4.0800	.84717
Attaching punishment to fraud in <i>halāl</i> logo will guarantee customers' confidence on <i>halāl</i> logos in the market.	2 (1.1)	6 (3.4)	7 (4.0)	93 (53.1)	67 (38.3)	4.2400	.78022
<i>Halāl</i> logo should contain	3 (1.7)	4 (2.3)	12 (6.9)	90 (51.4)	66 (37.7)	4.2114	.80650

inscription that can be easily identified by the consumers.							
<i>Halāl</i> logo clarifies doubt of food origin	5 (2.9)		6 (3.4)	93 (53.1)	71 (40.6)	4.2857	.78680
<i>Halāl</i> food certificate is a trademark on its own	2 (1.1)	3 (1.7)	6 (3.4)	106 (60.6)	58 (33.1)	4.2286	.69834
<i>Halāl</i> logo ensures easy recognition of food products		4 (2.3)	5 (2.9)	96 (54.9)	70 (40.0)	4.3257	.64520
Uniformity of <i>halāl</i> logo strengthens the reliability of <i>halāl</i> food status	1 (.6)	1 (.6)	4 (2.3)	100 (57.1)	69 (39.4)	4.3429	.61321

Table 4.44 shows that 51 (29.1%) strongly agreed and 113 (64.6%) agreed to the statement “*halāl* logo provides assurance of *halāl* food compliant products. Only 4 (2.3%) strongly disagreed, 2 (1.1%) disagreed and 5 (2.9%) were neutral. Strongly agreed and agreed formed 164 (93.7%) of the total respondents. It is considered high. This suggests that majority of the respondents accepted that *halāl* logo assures the consumers that the products they purchase are *halāl* compliant.

The result to the statement “government certified *halāl* logo will reduce doubt on *halāl* logos in the market” reflects that 73 (41.7%) strongly agreed and 91 (52%) agreed. 3 (1.7%) strongly disagreed, 6 (3.4%) disagreed and 2 (1.1%) were neutral to the statement. The percentage of the supporters to the statement was 164 (93.7%). This is high. Thus, it indicates that many of the respondents accepted that if government certified *halāl* logo is used on product, it will reduce doubt and increase confidence on the reliability of *halāl* logos in the market.

Those who submitted to the statement “*Halāl* logo generates awareness on *halāl* food consumption” formed 166 (94.9%) of the respondents. Only 9 (5.2%) of the respondents did not accept the statement. This implied that many among the processed food workers accepted that *halāl* logo generates awareness on *halāl* food consumption.

As depicted in Table 4.44, 64 (33.6%) strongly agreed and 99 (56.6%) agreed to the statement “*halāl* logo guarantees that the food is authentic *halāl*.” Only 2 (1.1%) disagreed and 10 (5.7%) were neutral. Strongly agreed and agreed formed 163 (93.2%) of the total respondents. It is considered high. This suggests that the processed food workers believed that *halāl* logo guarantees that the food is authentic *halāl*.

The results of analysis of responses to the statement “a unique and single logo for Nigeria guarantees the originality of *halāl* logo in the market” demonstrated that 49 (28%) strongly agreed and 108 (61.7%) agreed. Only 4 (2.3%) strongly disagreed, 9 (5.1%) disagreed and 5 (2.9%) were neutral to the statement. The percentage of the supporters to the statement was 167 (89.7%). This is considered high. Thus, it indicates that processed food workers agreed that a unique logo for Nigeria would guarantee the originality of *halāl* logo in the market.

Also, 67 (38.3%) and 93 (53.1%) of the respondents strongly agreed and agreed that if punishment is attached to fraud in the use and issuance of *halāl* logo, customers’

confidence on *halāl* food will increase. This indicates that 160 (91.4%) of the respondents supported the statement and formed 91.4% of the respondents. Only 2 (1.1%) strongly disagreed, 6 (3.4%) disagreed and 7 (4%) were neutral. It can be inferred that many processed foods workers were of the opinion that attaching punishment to fraud in *halāl* logo will guarantee customers' confidence on *halāl* logos in the market.

In the Table, it reflects that 66 (37.7%) and 90 (51.4%) which formed 156 (89.1%) of the respondents strongly agreed and agreed that *halāl* logo should contain inscription that can be easily identified by the consumers. This formed the majority of the respondents. Only 3 (1.7%) strongly disagreed and 4 (2.3%) disagreed while 12 (6.9%) respondents were neutral in their responses to the item. This indicates that clear inscription of *halāl* logo will help the consumers to identify the logo easily.

The respondents who hold that “*Halāl* logo clarifies doubt of food origin” were 164 (93.7%) as 71 (40.6%) strongly agreed and 93 (53.1%) agreed. Only 11 (6.3%) of the respondents did not accept the statement. This implies the processed food workers agreed that *halāl* logo removes the doubt of food origin when considering consumption of *halāl* food.

In the Table, it reflects that 58 (33.1%) and 106 (60.6%) which formed 164 (93.7%) of the respondents strongly agreed and agreed that *halāl* food certificate is a trademark on its own. This formed the majority of the respondents. Only 2 (1.1%) strongly disagreed and 3 (1.7%) disagreed while 6 (3.4%) respondents were neutral in their responses to the item. This indicates that many processed food workers considered *halāl* food certificate as a trademark of *halāl* food.

The respondents who hold that “*halāl* logo ensures easy recognition of food products” were 166 (94.9%) of the respondents. Only 9 (5.2%) of the respondents did not accept the statement. This implied that the processed food workers in South West, Nigeria agreed that *halāl* logo makes *halāl* food products to be easily recognised.

The respondents who hold that “uniformity of *halāl* logo strengthens the reliability of *halāl* food status” were 169 (96.5%) of the respondents. 6 (3.5%) of the respondents did not accept the statement. This implied that many among the processed food

workers agreed that if a unique and uniform logo could be designed and used it would strengthen the reliability of *ḥalāl* food status.

It could be concluded from the average mean of 4.2613 derived from the Table above that the processed food workers in South West, Nigeria possessed a high positive perception of *ḥalāl* food logo. This implies that the use of *ḥalāl* logos that are authentic and unique issued by reliable certification bodies or the government will increase the confidence and trust of the consumers in *ḥalāl* food.

#### 4.5.6 Processed food workers' perception on *halāl* food logistics and procurement

**Table 4.45** Distribution of responses and mean of processed food workers' perception of *halāl* food logistics and procurement

Item	Never Necessary	Unnecessary	Necessary	Very Necessary	Extremely Necessary	Mean	Standard Deviation
Packaging and labeling of <i>halāl</i> food should be in a contamination free environment.	2 (1.1)	8 (4.6)	16 (9.1)	110 (62.9)	39 (22.3)	4.0057	.77680
Training of personnel towards <i>halāl</i> food processing enhances <i>halāl</i> food quality.	1 (.6)		12 (6.9)	99 (56.6)	63 (36.0)	4.2743	.63804
Dedicated warehouse preserves the status of <i>halāl</i> food products.	3 (1.7)	4 (2.3)	10 (5.7)	92 (52.6)	66 (37.7)	4.2229	.79621
<i>Halāl</i> trained Muslim workers should be in every critical control point in <i>halāl</i> food production.	3 (1.7)	3 (1.7)	14 (8.0)	97 (55.4)	58 (33.1)	4.1657	.78122
Separate equipment should be used for <i>halāl</i> food processing where non-	2 (1.1)	3 (1.7)	13 (7.4)	102 (58.3)	55 (31.4)	4.1714	.73052

<i>halāl</i> food products are manufactured.							
Detection and screening devices should be used by firms to ensure <i>halāl</i> status of the raw materials.	2 (1.1)	7 (4.0)	11 (6.3)	105 (60.0)	50 (28.6)	4.108 6	.77659
All information on the ingredients used for the <i>halāl</i> food must be clearly provided on the packages.	5 (2.9)		22 (12.6)	95 (54.3)	53 (30.3)	4.091 4	.82538
There should be mutual knowledge between <i>halāl</i> food suppliers and the manufacturers.	2 (1.1)	5 (2.9)	18 (10.3)	97 (55.4)	53 (30.3)	4.108 6	.78395
Effective transportation system enhances <i>halāl</i> food status.	1 (.6)	4 (2.3)	16 (9.1)	90 (51.4)	64 (36.6)	4.211 4	.74732

Table 4.45 depicts that 2 (1.1%) viewed the statement “Packaging and labeling of *halāl* food should be in a contamination-free environment” as never necessary and 8 (4.6%) viewed it as unnecessary. This formed 5.7% of the respondents. However, 39 (22.3%) extremely necessary, 110 (62.9%) very necessary and 16 (9.1%) necessary formed 165 (94.3%) of the total respondents. It is considered high. This suggests that majority of the respondents submitted that *halāl* food should be packaged and labeled in an environment that is free from cross-contamination with non *halāl* substance or product.

The result to the statement “Training of personnel towards *halāl* food processing enhances *halāl* food quality and trust” reflects that 63 (36%) supported the option extremely necessary, 99 (56.6%) very necessary and 16 (6.9) necessary. The percentage of the supporters to the statement was 99.5%. This is considered high. Thus, it indicates that many of the respondents submitted that if people are trained in *halāl* food processing it will definitely enhance the quality of the *halāl* food products.

Those who submitted to the statement “Dedicated warehouse preserves the status of *halāl* food products” formed 96% of the respondents. Only 4% of the respondents did not accept the statement. This implies that the processed food workers accepted that if warehouse is dedicated for *halāl* food products it will preserve the status of *halāl* food products.

The statement “*Halāl* trained Muslim workers should be in every critical control point in *halāl* food production” is supported by 58 (33.1%) extremely necessary, 99 (55.5%) very necessary and 14 (8%) necessary. Only 3 (1.7%) viewed it never necessary and 3 (1.7%) viewed it unnecessary. Extremely necessary, very necessary and necessary formed 96.5% of the total respondents suggesting that the majority supported that internal auditors, who must be Muslims, should be involved in supervising and monitoring *halāl* food production in the *halāl* food industries.

The responses to the statement “Separate equipment should be used for *halāl* food processing where non-*halāl* food products are manufactured” demonstrated that 55 (31.4%) viewed it extremely necessary, 102 (58.3%) very necessary and 13 (7.4%) necessary reflected support for the statement. Only 2 (1.1%) viewed the statement never necessary and 3 (1.7%) viewed it unnecessary meaning that the majority, 170 (97.2%), which was considered high, did not support the statement. Thus, it indicates



and could be interpreted that the processed food workers deemed it important to have separate equipment for processing *ḥalāl* food where non *ḥalāl* food is produced in the same premises.

Also, the Table depicts that 94.4% of respondents viewed that “Detection and screening devices should be used by firms to ensure *ḥalāl* status of the raw materials” This was supported by 50 (28.6) extremely necessary, 105 (60%) very necessary and 11 (6.3%) necessary. Only 2 (1.1%) viewed it never necessary and 7 (4%) viewed it unnecessary. It can be inferred that the processed food workers in the South West Nigeria deemed it important that raw materials should be screened with screening devices to ensure the *ḥalāl*ness of the materials.

The responses to the statement “All information on the ingredients used for the *ḥalāl* food must be clearly provided on the packages” demonstrated that 53 (30.3%) viewed it extremely necessary, 95 (54.3 %) very necessary and 22 (12.6%) necessary. Only 5 (2.9%) viewed it never necessary and 5.5% viewed it as unnecessary. The percentage of the supporters to the statement was 170 (97.2%). Thus, it indicates and could be concluded that the processed food workers deemed it important that ingredients used for the *ḥalāl* food must be clearly provided on the packages.

“There should be mutual knowledge between *ḥalāl* food suppliers and the manufacturers” was supported by 53 (30.3%) extremely necessary, 97 (55.4%) very necessary and 18 (10.3%) necessary. Only 2 (1.1%) viewed it never necessary and 5 (2.9%) viewed it unnecessary. Extremely necessary, very necessary and necessary formed 168 (96%) of the total respondents. This suggests that processed food workers considered it necessary that mutual knowledge between *ḥalāl* food suppliers and the manufacturers will foster confidence in *ḥalāl* food products.

Those who subscribed to the statement “Effective transportation system enhances *ḥalāl* food status” formed 170 (97.1%) of the respondents as % viewed it extremely necessary, very necessary and necessary. Only 5 (2.9%) of the respondents did not accept the statement. This implies that the processed food workers accepted that effective *ḥalāl* transportation system would enhance the status of *ḥalāl* food.

The result from Table 4.45 shows that all the items that measured the perception of processed food workers’ construct were accepted with high percentages. The average

mean of the items of the variable is 4.1511. Thus, it reflects that the processed food workers in South West, Nigeria have a high positive perception of *ḥalāl* food logistics and procurement as influences of patronage of *ḥalāl* products.

#### 4.5.7 Knowledge of food firm employees (processed food workers) of *ḥalāl* terms

**Table 4.46 Distribution of responses and mean of knowledge of of *ḥalāl* terms possessed by processed food workers**

I have knowledge of the following Arabic terms on *Ḥalāl* food

Item	Yes	No	Mean	Standard Deviation
<i>Ḥalāl</i>	148(84.6)	27(15.4)	1.1543	.36226
<i>Ḥarām</i>	169(96.6)	6(3.4)	1.0343	.18248
<i>Sunnah</i>	132(75.4)	43(24.6)	1.2457	.43175
<i>Mustaḥabb</i>	64(36.6)	111(63.4)	1.6343	.48301
<i>Makruh</i>	43(24.6)	132(75.4)	1.7543	.43175
<i>Shubhaat</i>	24(13.7)	151(86.3)	1.8629	.34499
<i>Tayyib</i>	53(30.3)	122(69.7)	1.697	.4608
<i>Ḥalalan Tayyiban</i>	51(29.1)	124(70.9)	1.7086	.45572
<i>Al-khabithat/al-khabā'ith</i>	14(8.0)	161(92.0)	1.9200	.27207
<i>Dhibh</i>	12(6.9)	163(93.1)	1.9314	.25345
<i>Dhabiiah</i>	18(10.3)	157(89.7)	1.8971	.30464
<i>Maytatah</i>	25(14.3)	150(85.7)	1.8571	.35093
<i>Al-damm</i>	19(10.9)	156(89.1)	1.8914	.31199
<i>Khinzir</i>	28(16.0)	147(84.0)	1.8400	.36766
<i>Al-khamr</i>	15(8.6)	160(91.4)	1.9143	.28074
<i>Bahimah al-an'am</i>	16(9.1)	159(90.9)	1.9086	.28904

Table 4.46 depicts that the processed food workers can mostly tell the meanings of only three terms (*ḥalāl*, *ḥarām* and *sunnah*) from the group of sixteen Arabic *ḥalāl* terms. This revealed a low level of knowledge of Arabic *ḥalāl* terms as the average mean of the items of the variable is 1.7033 among the processed food workers and therefore, deserved to be given more education on *ḥalāl* related Arabic terms.

**Table 4.47 Pearson correlation analysis of each of the variables (awareness of *halāl* food (AHF); perception of *halāl* certification (PHC); perception of *halāl* logo (PHLo); knowledge of *halāl* food (KHF); and perception of *halāl* logistics (PHL) on perception of *halāl* food (PHF) of the processed food workers**

	Mean	Std Dev	PHF	AHF	PHC	PHLo	KHF	PHL
PHF	38.6743	3.55129	1.0					
AHF	40.7829	6.13533	.511	1.0				
PHC	46.8629	5.11630	.801	.503	1.0			
PHLo	46.6743	5.42792	.798	.571	.827	1.0		
KHF	45.6343	5.92801	.717	.561	.819	.782	1.0	
PHL	24.4966	3.50309	.656	.530	.588	.671	.617	1.0

**Dependent Variable: Perception**

The Table above shows that there was significant relationship between the independent variables selected in this study with the dependent variable (perception of *halāl* food) among the processed food participants: Awareness of *halāl* food ( $r = .511$ ,  $p < 0.05$ ); knowledge of *halāl* food ( $r = .717$ ,  $p < 0.05$ ); perception of *halāl* food certification ( $r = .801$ ,  $p < 0.05$ ); perception of *halāl* logo ( $r = .798$ ,  $p < 0.05$ ) and perception of *halāl* logistics ( $r = .656$ ,  $p < 0.05$ ). The result from the study of processed food workers' perception of *halāl* food was not different from that of Muslim consumers and processed food workers. There were significant relationships between the awareness of *halāl* food, knowledge of *halāl* food, perception of *halāl* certification and *halāl* logistics possessed by processed food workers on their perception of *halāl* food. The result in this respect tends to be same with the previous results from the Muslim consumers and processed food workers because of the environmental commonalities. *Halāl* logo has a positive significance on the perception of processed food workers towards *halāl* food. It was established that JAKIM *halāl* logo has been serving as an influencing determinant in the choice of *halāl* food in Malaysia among the consumers. The result is cohesive with the finding submitted by Aslan (2016) that *halāl* food labeling and logo have a positive correlation on the behavioural intention and perception of *halāl* food as cited in chapter two of this thesis.

**Table 4.48: Multiple regression analysis on joint contribution of variables on processed food workers' perception of *halāl* food**

Multiple R = .842					
Multiple R <sup>2</sup> = .709					
Multiple R <sup>2</sup> (Adjusted) = .700					
Standard Error of Estimate = 1.94471					
Source of Variance	Sum of Square	Df	Mean of Square	F-Ratio	P
Regression	1555.292	5	311.058	82.249	<0.05
Residual	639.142	169	3.782		
Total	2194.434	174			

**Dependent Variable:** Perception

#### 4.5.9 Research Question Three

To what extent can awareness of *halāl* food, knowledge of *halāl* food, perception of *halāl* certification, perception of *halāl* logo and logistics influence the perception of processed food workers on *halāl* food?

Table above shows that there was joint effect of the independent variables awareness of *halāl* food (AHF); perception of *halāl* certification (PHC); perception of *halāl* logo (PHLo); knowledge of *halāl* food (KHF); and perception of *halāl* logistics (PHL) and processed food workers' perception towards *halāl* food in the study area ( $R = 0.842$ ,  $p < .05$ ). The combination of the independent variables accounted for 70.0% (adjusted  $R^2 = 0.700$ ) of the total variance in the prediction towards the processed food workers' perception towards *halāl* food. The analysis of variance of the multiple regression data yielded an F-ratio value which was found to be significant at 0.05 Alpha level ( $F = 82.249$ ,  $P < 0.05$ ). This shows that the independent variables jointly contributed to processed food workers' perception of *halāl* food.



**Table 4.49: Multiple regression analysis of each of the variables (awareness of *halāl* food (AHF); perception of *halāl* certification (PHC); perception of *halāl* logo (PHLo); knowledge of *halāl* food (KHF); and perception of *halāl* logistics (PHL) on perception of *halāl* food (PHF) of the processed food workers**

	Unstandardised Coefficient		Standardised Coefficient	T	Sig.	Remark
	B	Std Error	Beta			
(Constant)	10.464	1.425		7.344	.000	Sig.
AHF	.019	.031	.034	.531	.529	Not Sig.
PHC	.023	.047	.038	.483	.630	Not Sig.
PHLo	.251	.051	.376	4.260	.000	Sig.
KHF	.236	.053	.361	4.425	.000	Sig.
PHL	.083	.044	.114	1.874	.063	Not sig.

**Dependent Variable: Perception**

The contribution of the variables used to predict the perception of processed food workers towards *halāl* food consumption were displayed in Table 5.5.10 The results revealed that *halāl* logo and knowledge of *halāl* food possessed by the processed food workers had significant contributions to their perception of *halāl* food consumption with *halāl* logo ( $\beta = .376$ ,  $t = 4.260$ ,  $p < 0.05$ ) and knowledge ( $\beta = .361$ ,  $t = 4.425$ ,  $p < 0.05$ ). However, awareness of *halāl* food was not significant ( $\beta = .034$ ,  $t = 531$ ,  $p > 0.05$ ), perception of *halāl* logo do not significantly predict the perception of *halāl* food of the processed food workers food workers. Also perception of *halāl* logistics do not significantly predict perception of *halāl* food of the processed food workers ( $\beta = .114$ ,  $t = 1.874$ ,  $p > 0.05$ ). The result indicates that the null hypothesis is partly accepted.

**Table 4.50: ANOVA Table showing the influence of demographic factors of processed food workers towards the awareness, knowledge and perception of *halāl* food**

		Sum of Square	Df	Mean Square	F	Sig.
Ethnicity* awareness, knowledge and perception	Between Groups	8111.925	2	4055.963	30.354	.000
	Within Groups	22982.612	172	133.620		
	Total	31094.537	174			
Age* awareness, knowledge and perception	Between Groups	5661.017	8	707.627	4.619	.000
	Within Groups	25433.520	166	153.214		
	Total	31094.537	174			
Religion* awareness, knowledge and perception	Between Groups	3620.636	1	3620.616	22.799	.000
	Within Groups	27473.901	173	168.809		
	Total	31094.537	174			
Level of education* awareness, knowledge and perception	Between Groups	453.910	3	151.303	.844	.471
	Within Groups	30640.627	171	170.185		
	Total	31094.537	174			
Position* awareness, knowledge and perception	Between Groups	1828.943	7	261.278	1.491	.174
	Within Groups	29265.594	167	261.278		
	Total	31094.537	174			
State* awareness, knowledge and perception	Between Groups	710.718	5	142.144	.791	.558
	Within Groups	30383.819	169	179.786		
	Total	31094	174			

Result from the Table 4.50 shows the influence of demographic factors of processed food workers towards the awareness, knowledge and perception of *halāl* food. The result reveals that there was significant influence of ethnicity on processed food workers' awareness, knowledge and perception of *halāl* food ( $F(2,172) = 30.354, P < 0.05$ ), age is also significant ( $F(8,166) = 9.143, P < 0.05$ ), religion is also significant ( $F(1,173) = 22.799, P < 0.05$ ). However, position ( $F(7,167) = 1.491, P > 0.05$ ), level of education ( $F(3,171) = .844, P < 0.05$ ) and state of residence ( $F(5,169) = .791, P < 0.05$ ) had no significant influence on awareness, knowledge and perception of *halāl* food among processed food workers. This implies that there is partial significant influence of demographic factors of processed food workers on the awareness knowledge and perception of *halāl* food.

**Table 4.51: ANOVA showing the effect of knowledge of *ḥalāl* food possessed by processed food workers on their perception of *ḥalāl* food certification and logistics**

		Sum of Square	Df	Mean Square	F	Sig.
Knowledge of halal food* perception halal food certification	Between Groups	158.385	21	7.542	2.488	.001
	Within Groups	463.809	153	3.031		
	Total	622.194	174			
Knowledge of halal food* perception halal food logistics	Between Groups	104.471	18	5.804	1.749	.036
	Within Groups	517.723	156	3.319		
	Total	622.194	174			

Result from Table 4.51 shows the effect knowledge of processed food workers on *halāl* food certification. The result reveals that there was significant effect of *halāl* knowledge on perception of processed food workers towards *halāl* food certification ( $F(21,153) = 2.488, P < 0.05$ ). This implies that processed food workers possessed positive perception of *halāl* food food certification.

The result reveals that there was significant effect of *halāl* knowledge on *halāl* food logistics ( $F(18,156) = 1.749, P < 0.05$ ). This implies that processed food workers possessed positive perception of *halāl* food logistics.

**H:** There is no significant relationship between demographic profiles and awareness, knowledge, perception of *ḥalāl* food among processed food workers.

**Table 4.52: Correlation matrix showing the relationship between demographic profiles and awareness, knowledge, perception of *ḥalāl* food among processed food workers**

Variables	1	2	3	4	5	6	7	8	Mean	SD
awareness, knowledge and perception of ḥalāl food	1								125.091	13.368
Gender	-.224**	1							1.565	.497
Ethnicity	-.500**	.147	1						1.051	.308
Age	-.058	-.128	-.044	1					4.720	1.917
Religion	-.341**	.103	.137	.408*	1				1.480	.501
Position	.181**	.121	-.012	-.260**	-.179*	1			4.726	2.300
Level of education	-.066	.007	S.093	-.269**	-.050	.028	1		2.337	.997
State of residence	-.041	-.015	-.063	-.061	-.014	-.002	-.002	1	3.406	1.682

Result from Table 4.52 shows that four independent variables (gender, ethnicity, religion and position) have significant positive and negative relationship with the dependent variable (awareness, knowledge and perception). Gender is significant:  $r(173) = -.224$ ,  $p < 0.05$ , ethnicity:  $r(173) = -.500$ ,  $p < 0.05$ , religion:  $r(173) = -.341$ ,  $p < 0.05$  and position:  $r(173) = .181$ ,  $p < 0.05$  while age  $r(173) = -0.058$ ,  $p > 0.05$ , level of education  $r(173) = -0.066$ ,  $p > 0.05$  and state of residence  $r(173) = -0.041$ ,  $p > 0.05$  do not have significant relationship with awareness, knowledge and perception of *halāl* food among processed food workers.



**H:** There is no significant relationship between *ḥalāl* knowledge and perception of *ḥalāl* food among processed food workers.

**Table 4.53: Summary of correlation analysis showing the relationship between *ḥalāl* knowledge and perception of *ḥalāl* food among processed food workers**

Variables	Mean	Std. Dev	N	Df	R	P	Remark
Ḥalāl knowledge	4.1657	1.89099	175	173	-.084	0.267	Not Sig.
Perception	38.6743	3.55129					

Result from Table 4.53 shows that there is no significant relationship between *ḥalāl* knowledge and perception of *ḥalāl* food of processed food workers on *ḥalāl* food products in South West, Nigeria ( $r = -.084$ ;  $p > 0.05$ ). This implies that *ḥalāl* knowledge does not influence *ḥalāl* perception of processed food workers on *ḥalāl* food. Hence, the hypothesis was accepted.

**H:** There is no significant relationship between knowledge of *ḥalāl* food and perception of processed food workers towards *ḥalāl* certification

**Table 4.54: Summary of correlation analysis showing the relationship between knowledge and perception of processed food workers towards *ḥalāl* certification**

Variables	Mean	Std. Dev	N	Df	R	P	Remark
Ḥalāl knowledge	4.1657	1.89099	175	173	-.011	0.882	Not Sig.
Ḥalāl certification	46.8629	5.11630					

Result from Table 4.54 shows that there is no significant relationship between *ḥalāl* knowledge and *ḥalāl* certification of processed food workers on *ḥalāl* food products in South West, Nigeria ( $r = -.011$ ;  $p > 0.05$ ). This implies that *ḥalāl* knowledge does not influence *ḥalāl* certification of processed food workers on *ḥalāl* food. Hence, the hypothesis is accepted.

**H:** There is no significant relationship between *ḥalāl* knowledge and logistics among processed food workers.

**Table 4.55: Summary of correlation analysis showing the relationship between *ḥalāl* knowledge and logistics among processed food workers**

Variables	Mean	Std. Dev	N	Df	R	P	Remark
<i>Ḥalāl</i> knowledge	4.1657	1.89099	175	173	-.025	0.740	Not Sig.
Logistics	37.3600	4.85794					

Result from Table 4.55 shows that there is no significant relationship between *ḥalāl* knowledge and logistics of processed food workers on *ḥalāl* food products in South West, Nigeria ( $r = -.025$ ;  $p > 0.05$ ). This implies that *ḥalāl* knowledge does not influence logistics of processed food workers on *ḥalāl* food. Hence, the hypothesis is accepted.

#### 4.5.8 Unit summary of discussion

This unit addresses research question three. Table 4.48 depicts that there was a significant positive effect of awareness of *ḥalāl* food, knowledge of *ḥalāl* food, perception of *ḥalāl* certification, *ḥalāl* logo and logistics on the perception of processed food workers of *ḥalāl* food. This answers research question three and achieved research objective three. Further results of the study reveal that many among the processed food workers were aware of *ḥalāl* food. Only few of them were aware of *ḥalāl* promotions, festivals, *ḥalāl* market and economic advantage of *ḥalāl* food production. The results reveal that the processed food workers possessed positive perception towards *ḥalāl* food, its certification, logo and logistics. Also, they exhibited positive and right perception towards its significance in *ḥalāl* food production and acknowledged the significance of government involvement in *ḥalāl* food certification and unique *ḥalāl* logo in *ḥalāl* food industry.

The findings from the ANOVA results indicate that there was partial influence of demographic factors of processed food workers towards awareness, knowledge and perception of *ḥalāl* food. Only gender, ethnicity and age have significant effect on awareness, knowledge and perception of *ḥalāl* food. Position, education and state of origin have no significant impact on awareness, knowledge and perception of *ḥalāl* food. *Ḥalāl* knowledge is found significant on perception of processed food workers towards *ḥalāl* food certification. The results also indicate that there was no significant influence of *ḥalāl* knowledge on the perception of processed food workers towards *ḥalāl* food logistics and procurement.

Table 4.51 shows the result of the hypothesis. It depicts that there was significant relationship between perception of *ḥalāl* logo and knowledge of *ḥalāl* food and the perception of *ḥalāl* food by the processed food workers. However, awareness of *ḥalāl* food, perception of *ḥalāl* certification and logistics had negative significant relationship with their perception of *ḥalāl* food. Thus the hypothesis was significantly accepted. The results from Table 4.52 show that gender, ethnicity, religion and position had significant relationships with awareness, knowledge and perception of *ḥalāl* food among processed food worker. However, age, level of education and state of origin had no significant relationship with awareness, knowledge and perception of *ḥalāl* food among the processed food workers. Thus, the null hypothesis was partially rejected.

The stated hypothesis was accepted as shown in Table 4.53 that there is no significant relationship between *ḥalāl* knowledge and perception of *ḥalāl* food of processed food workers on *ḥalāl* food products in South West, Nigeria ( $r = -.084$ ;  $p > 0.05$ ). Further hypothesis was accepted in Table 4.54, as depicted that there was no significant relationship between *ḥalāl* knowledge and *ḥalāl* certification of processed food workers on *ḥalāl* food products in South West, Nigeria ( $r = -.011$ ;  $p > 0.05$ ). The hypothesis was accepted in Table 4.55 as depicted that there is no significant relationship between *ḥalāl* knowledge and perception of *ḥalāl* logistics of processed food workers of *ḥalāl* food products in South West, Nigeria ( $r = -.025$ ;  $p > 0.05$ ).

#### **4. 9 Chapter summary**

This section presents the summary of the discussion of the findings of the the three population sampled. These are Muslim consumers, primary food workers and processed food workers. The first segment presents the demographic profiles of the respondents while the second segments presents their sources of *ḥalāl* knowledge. The third segment of the chapter analyses, interprets and discusses the findings on the Muslim consumers' responses who were mainly Muslims. The sample size for the Muslim consumers was 2223 participants. Male participants were 1493 while 1720 were females. The questionnaire consisted of eighteen sections including demographic section. Rensis Likert scale which provides five options on each item for the respondent to choose any option that best represents his or her opinion was used to measure the variables except the demographic factors, source of *ḥalāl* knowledge and the knowledge of *ḥalāl* term variable. Extreme-end style (Yes/No) was adopted for knowledge of *ḥalāl* terms construct.

The segment presents answer to research question one (1) which answers the stated objective one (1) in chapter one. Awareness, knowledge, attitude, social factors (subjective norms or external factors), intrinsic factor- perceived behavioural control, religiosity, behavioural intention, awareness of *ḥalāl* certification, perception of *ḥalāl* certification and *ḥalāl* logistics were the independent variables while perception was the dependent variable for research question one (1). Demographic profiles of the participants revealed the background of the respondents and the sources through which



they acquired *ḥalāl* food knowledge. There was gender balance among the respondents.

The result shows that Muslims in South West, Nigeria have good knowledge of *ḥalāl* food. The Muslims in South West, Nigeria possess a good level of awareness, knowledge of *ḥalāl* food phenomenon and exhibit a positive perception towards it. Also, the results reveal awareness, knowledge and perception, planned behaviour (attitude, subjective norms and perceived behaviour control), religiosity, behavioural intention, awareness of *ḥalāl* certification perception of *ḥalāl* certification and *ḥalāl* logistics as significant influencers on perception of Muslim consumers towards *ḥalāl* food. The result corroborates some of the results of the previous research findings on *ḥalāl* food concept such the work of Abdul Khaleq.

The fourth segment reports the findings among the primary food workers which consists of four sections. These are the demographic and source of *ḥalāl* knowledge, frequency and mean descriptive statistics of the constructs, ANOVA and correlation matrix Tables. From the Table of distribution of gender, 44.8% and 55.2% were male and female participants respectively. This symbolises that the sample was good for the study. Yoruba groups was predominant among the respondents with 267 (92.1%). Majority of the participants were between the age of 18 and 45 which formed 91% of the respondents.

However, participants between 31 and 40 have the highest percentage of 239 (44.5%) of 290 respondents. This means that people of 46 years and above did not significantly participate. It could be inferred from the result that majority of the people above 45 may no longer be agile in running the business or they might have withdrawn due to the influence of young vendors on the patrons as majority of the consumers would like to patronise young food workers than the old ones. Muslims were found to be the most of the primary food workers with 66.2% respondents while Christians formed 33.4%.

The result indicates that 37.6% of the respondents among primary food workers possessed West African School Certificate (WASC/SSCE). This is followed by NCE/OND and Bachelor Degree holders. Restaurant, abattoir and cafeteria/canteen workers significantly participated in the study. Restaurant has the highest percentage 23.4% seconded by abattoir section with 20%. Many of the respondents were at

managerial cadres. This might be because many of the food workers own the businesses and they directly manage them by themselves. This gave them the opportunity to have time to attend to the questionnaires than other workers. The respondents in the six states participated very well in the study with Osun State having the highest (100%) return. Most of the primary food workers got *ḥalāl* knowledge from the Islāmic programmes such as *ta'lim*, *tadhkirah/Adhkaar* and weekly Islāmic programmes popularly referred to as *Asalatu* programme with 45.5% of the respondents as indicated in Table 4.2 This was followed by mosque with 28.6%.

Awareness of *ḥalāl* food, knowledge of *ḥalāl* food, awareness of *ḥalāl* slaughter, awareness of *ḥalāl* certification, perception of *ḥalāl* certification and *ḥalāl* logistoics jointly had a great influence on the perception of *ḥalāl* food among primary food workers. The primary food workers exhibited positive perception towards *ḥalāl* food. However, despite the fact that many among the primary food workers are aware of *ḥalāl* food and possessed a good knowledge of it as revealed in the result still, majority of them had a low knowledge of *ḥalāl* slaughter. Many of the primary food workers were not aware of *ḥalāl* food certification and its bodies though they hold a positive and right perception towards its significance in *ḥalāl* food production. They hold that government involvement in *ḥalāl* food certification and unique *ḥalāl* logo would maintain and sustain *ḥalāl* food confidence, trust and integrity. *Ḥalāl* food logistics and procurement was seen as a vital service to ensure solid reliance on the integrity of the product. Majority of the primary food workers were not familiar with and did not understand many Arabic terms related to *ḥalāl* food. The findings indicate that there was a significant influence of *halāl* knowledge on perception of primary food workers towards *ḥalāl* food certification and logistics.

The fifth segment reports the findings among the processed food workers. This consists of distribution of demographic profiles and statistics of *ḥalāl* knowledge, frequency and mean descriptive statistics of other predictors, Pearson correlation, ANOVA Tables and correlation matrix of *ḥalāl* knowledge. The result depicts that 43.4% of males and 56.6% of females participated in the study. This shows that the sample reflects gender balance. The respondents were dominated by Yoruba group with 170 (97.1%) of the respondents. The participants between the age of 31 and 55 formed the majority with 91% of the respondents. The respondents were predominantly Muslims and Christians with 91 (52%) and 84 48% Muslims and

Christians respectively. Most of the processed food workers hold West African School Certificate (WASC/SSCE) with 84 (48%) of the respondents. The respondents covered the distributors with 33.7%, retailers 25.1% and directors 19.4%. There was a good return of the questionnaires from the six states with Lagos, Ondo and Ekiti States having the highest return of questionnaire. Table 4.2 shows that majority of the processed food workers got knowledge of *ḥalāl* food from Islāmic programmes such as *ta'lim*, *tadhkirah/Adhkaar* and weekly Islāmic programme- Asalatu programme with 62 (35.4%) of the respondents. Processed food workers are aware of *ḥalāl* food but only few of them were aware of *ḥalāl* promotions, festivals, *ḥalāl* market and economic advantages of *ḥalāl* food production.

The results reveal that there was a great significant influence of awareness of *ḥalāl* food, knowledge of *ḥalāl* food and perception of *ḥalāl* certification, *ḥalāl* logo and *ḥalāl* logistics on the perception of processed food workers of *ḥalāl* food. The processed food workers possessed a positive perception on *ḥalāl* food. They also possessed a positive perception of *ḥalāl* certification, logo and logistics and their significance in *ḥalāl* food production and hold that government participation in *ḥalāl* food certification and the provision of unique *ḥalāl* logo is significant in *ḥalāl* food industry. Further more, the findings indicate that there was a partial influence of demographic factors of processed food workers on awareness, knowledge and perception of *ḥalāl* food.

## Endnotes

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**CHAPTER FIVE**  
**ANALYSIS AND INTERPRETATION OF *ḤALĀL* FOOD PHENOMENON**  
**AMONG HEALTH WORKERS AND *SHARĪ'AH* COMPLIANCE OF *ḤALĀL***  
**CERTIFICATION BODIES**

**5.0 Preamble**

This chapter discusses the findings of the research based on the analysis and the interpretation of the data obtained from the responses of the respondents. The study employed two research instruments namely questionnaire for health workers' segment and interview for certification bodies to achieve the stated objectives. Questionnaire was administered to 525 respondents. Gender, age, education, religion, state of residence, source of *ḥalāl* food knowledge and position were the demographic profiles studied among the health workers. Interviews were conducted with eight personnel comprising CEOs and other members of the existing *ḥalāl* certification bodies in South West, Nigeria to investigate their operation standards and their perceptions towards international *ḥalāl* food accreditation. Interview sessions were recorded with the consent of the interviewees. Focus group discussions were conducted involving Muslim consumers, food service providers and health workers. The data were subsequently transcribed, coded and analysed adopting pseudonyms for the names of the interviewees. Thus this chapter answers research questions one and two.

**Table 5.1: Socio-demographic characteristics of health workers**

Category	Frequency	/percent
<b>Gender</b>		
Male	261	49.7
Female	264	50.3s
Total	525	100
<b>Age</b>		
18-25	44	8.4
26-30	65	12.4
30-35	101	19.2
36-40	131	25.0
41-45	111	21.1
46-50	49	9.3
51-55	22	4.2
56-60	2	0.4
60 above		
Total	525	100
<b>Ethnicity</b>		
Yoruba		501 (95.4)
Hausa		8 (1.5)
Igbo		6 (1.1)
Others		10 (1.9)
Total		525 (100)
<b>Occupation</b>		-
Government employee		
Private employee		
Self employed		
Student		
Total		
<b>Section</b>		
Environmental/water supply	265	(50.5)
NAFDAC	96	(18.3)
Veterinary	158	(30.1)
Others	6	(1.1)
Total	525	(100)
<b>State of Residence</b>		
Ekiti		83 (15.8)
Lagos		89 (17.0)
Ogun		84 (16.0)
Ondo		94 17.9)
Osun		85 (16.2)
Oyo		90 (17.1)
Total		525 (100)
<b>Religion</b>		

Islam		253 (48.2)
Christianity		266 (50.7)
Others		6 (1.1)
Total		525 (100)
<b>Level of Education</b>		
Primary	2	0.4
Secondary	31	5.9
NCE/OND	108	20.6
Degree/HND	308	58.7
M.A/MSc	76	14.5
Ph.D.	-	-
Others	-	-
Total	525	100

As shown in the Table, there was even involvement of both males and females in the conduction of the questionnaire among the health workers. However, female staff respondents were slightly higher than the male staff as females recorded 264 which represented 50.3% against males of 261 (49.7%) of the total sample of 525 respondents. Yoruba emerged as the dominants of the health sectors in the region of study. The Yoruba formed 501 (95.4%) of the total sample of 525 responded to the questionnaire. This suggests that the area of study is typically Yorubaland. The participants in this study majorly fell between the age of 31 and 45 years old as participants between 36 and 40 years were 101 (25.0%) being the highest group of the respondents. Participants between 41 and 45 years were 111 (21.1%) and those between 31 and 35 were 110 (19.2%). This indicates that majority of the staff in health section were dominated by adult staffers. The respondents were predominantly Christians and Muslims in health sections with 266 (50.7%) and 253 (48.2%) Christians and Muslims respectively. The health sectors in the region of study were staffed with mostly Bachelor Degree/HND and NCE/OND graduates with 308 (58.7%) and 108 (20.6%) respectively. Equal copies (100) of the questionnaire were distributed across the six states of the region of study. It is revealed that most of the respondents across the states returned their questionnaire. Ogun and Oyo States had the highest number of returned questionnaire with 94 (17.9%) and 90 (17.1%) respectively. The researcher distributed 100 copies of questionnaire in each state of the study among the health workers according to their availability and accessibility. The Table depicts that water and environmental sanitation workers as major respondents with 265 (50.5%). Veterinarians also contributed significantly with 168 (30.1%) respondents. NAFDAC workers were in small numbers in their totality meaning that 96 (18.3%) respondents recorded was a significant number.



**Table 5.2: Source of *ḥalāl* food knowledge among health workers**

<b>Item</b>	<b>Frequency</b>	<b>Percentage</b>
Social media		
Radio	17	3.2
Television	44	8.4
Newspaper	44	8.4
Mosque	125	23.8
Islāmic programmes: ( <i>ta'lim/tadhki rah/ weekly Islāmic program (Asalatu)</i> etc)	135	25.7
Family	60	11.4
Friend	66	12.6
Teacher	34	6.5
Total	525	100

Among the health workers, Islāmic programmes and mosques were the major sources of *ḥalāl* food knowledge. Islāmic programmes recorded the highest number with 135 (25.7%) respondents while mosque recorded 125 (23.8%) respondents. This implies that most people heard of *ḥalāl* food from mosques on Friday sermons and at the various programmes organised by Islamic societies and organisations.

### 5.3:1 Awareness of *ḥalāl* food among health workers

**Table 5.3: Distribution of responses and mean of awareness of *ḥalāl* food among health workers (N= 525)**

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Standard Deviation
I am familiar with the term <i>ḥalāl</i> .	17 (3.2)	51 (9.7)	80 (15.2)	219 (41.7)	158 (30.1)	3.8571	1.05596
I am aware of <i>ḥalāl</i> food.	13 (2.5)	62 (11.8)	90 (17.1)	211 (40.2)	149 (28.4)	3.8019	1.05516
I am familiar with the term <i>ḥalālan tayyiban</i> .	50 (9.5)	101 (19.2)	117 (22.3)	148 (28.2)	109 (20.8)	3.3143	1.26094
I (do) hear of <i>ḥalāl</i> slaughter (killing).	33 (6.3)	67 (12.8)	65 (12.4)	223 (42.5)	137 (26.1)	3.6933	1.17026
I know some <i>ḥalāl</i> certification organisations in South West Nigeria.	45 (8.6)	118 (22.5)	141 (26.9)	135 (25.7)	86 (16.4)	3.1886	1.20300
I have come across <i>ḥalāl</i> logos in some food products.	41 (7.8)	86 (16.4)	104 (19.8)	175 (33.3)	119 (22.7)	3.4667	1.22526
I know that pork and its products are <i>ḥarām</i> .	13 (2.5)	67 (12.8)	88 (16.8)	195 (37.1)	162 (30.9)	3.8114	1.08453
I know that alcohol and its products are <i>ḥarām</i> .	9 (1.7)	58 (11.0)	87 (16.6)	176 (33.5)	195 (37.1)	3.9333	1.06351

In the Table, it reflects that 30.1% and 41.7% which indicates 77.5% of the respondents strongly agreed and agreed that they were familiar with *ḥalāl* term. This formed the majority of the respondents. Only 3.2% strongly disagreed and 9.7% disagreed that they were not familiar with the term '*ḥalāl*' while 15.2% respondents were neutral in their responses to the term. This implies that majority of the health workers were familiar with the term. *Ḥalāl* is a common language among the Yoruba Muslims and non-Muslims and has been more or less Yorubised- taken as a Yoruba word.

The Table indicates that majority of the respondents (68.6%) agreed that they were aware of *ḥalāl* food while 2.5% strongly disagreed, 11.8% disagreed and neutral 17.1% showed that they were not aware of *ḥalāl* food. In general, most of the health workers were aware of *ḥalāl* food as food recommended for Muslims.

Also, 28.2% and 20.8% of the respondents strongly agreed and agreed that they were familiar with the term '*ḥalālan tayyiban*' (good and wholesome). This indicates that 49% of the respondents strongly agreed and agreed to the item while 51% did not agree. It can be inferred that the familiarity with the term '*ḥalālan tayyiban*' among health workers in the South West, Nigeria was at a moderate level.

The Table depicts the responses of health workers on *ḥalāl* slaughter. A total of 68.6% of the respondents claimed that they heard of *ḥalāl* slaughter. Only 31.5% of the respondents indicated that they did not hear of *ḥalāl* slaughter. It can thus be generalised that there is a significant awareness of *ḥalāl* slaughter among health workers in South West, Nigeria.

There is low knowledge on the existence or operation of *ḥalāl* food certification organisations among the health workers in South West, Nigeria as only 42.1% of the respondents submitted that they knew that *ḥalāl* food certification organisations are operating in the South West, Nigeria. A total of 57.2% indicated that they did not know that *ḥalāl* food certification organisations exist. This means that there is a need for advocacy and sensitisation on the operation of *ḥalāl* food organisations among the health workers in South West, Nigeria.

The Table shows that 294 (56%) have come across *ḥalāl* food logo(s) among the respondents. 119 (22.7%) strongly agreed and 175 (33.3%) agreed. However, 44%

indicated that they have not come across *ḥalāl* logo with 41 (7.8%) strongly disagreed, 86 (16.4%) disagreed and 104 (19.8%) neutral. The implication is that not many among health workers bothered to check *ḥalāl* logos on food products when they purchased.

Also, the Table shows that 357 (68%) of the respondents have the knowledge that pork and its products are *ḥarām* for Muslims consumption with 162 (30.9%) strongly agreed and 195 (37.1%) agreed. Only 13 (2.5%), strongly disagreed, 67 (12.8%) disagreed and 88 (16.8%) neutral. Thus, it can be inferred that the health workers in South West Nigeria possessed significant knowledge of the prescribed food for Muslim consumption by *Sharī'ah*. The awareness of pork as *ḥarām* meat among the health workers is slightly high. This can be because pig is widely known to Muslims and non Muslims around the world to be *ḥarām* for Muslim consumption.

Taking of alcohol and its products is generally known to be prohibited by *Sharī'ah* for Muslim consumption among the health workers of South West, Nigeria as 371 (70.6%). 37.1% strongly agreed and 33.5% agreed. Only 9 (1.7%) strongly disagreed, 58 (11%) disagreed and 87 (16.6%) stayed neutral. The result indicates that most of the health workers knew that alcohol and its products are *ḥarām* for Muslims consumption. This is an indication that health workers in the South West Nigeria are aware of alcohol and its products as prohibited drinks for the Muslims. Alcohol is a popular drink known by many Muslims and non Muslims around the world to be *ḥarām* for a Muslim who is serious with his faith. This may be because it is clearly pronounced as *ḥarām* by Allāh in the Quran earlier referenced.

All in all, the result in Table 5.3 depicts that health workers in South West Nigeria have a good level of awareness of *ḥalāl* food with the mean of 3.6333. However, there is a need for more *ḥalāl* food advocacy among them because they are keenly involved in food processing.

### 5.3.2 Health workers' knowledge of *halāl* food

**Table 5.4: Distributoion of responses and mean of health workers' knowledge of *halāl* food**

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Standard Deviation
<i>Halāl</i> food is food recommended for Muslim consumption	19 (3.6)	59 (11.2)	86 (16.4)	224 (42.7)	137 (26.1)	3.7638	1.07070
<i>Halāl</i> is anything that is permissible by <i>Sharī'ah</i> .	15 (2.9)	47 (9.0)	120 (22.9)	195 (37.1)	148 (28.2)	3.7886	1.04071
<i>Halāl</i> food is food prepared under strict adherence to <i>Sharī'ah</i> dietary law.	17 (3.2)	55 (10.5)	132 (25.1)	191 (36.4)	130 (24.8)	3.6895	1.05606
Animal that is not slaughtered according to Islāmic rites is not edible for Muslim consumption	18 (3.4)	47 (9.0)	78 (14.9)	241 (45.9)	141 (26.9)	3.8381	1.02938
NAFDAC regulations for animal slaughter cover Islāmic dietary law.	52 (9.9)	76 (14.5)	173 (33.0)	163 (31.0)	61 (11.6)	3.2000	1.13076
<i>Halāl</i> animal must be slaughtered invoking Allāh's name before the meat can be edible for Muslim consumption	13 (2.5)	42 (8.0)	116 (22.1)	188 (35.8)	166 (31.6)	3.8610	1.03087

It was demonstrated by the respondents that they understood *ḥalāl* food concept as majority of them subscribed to the statement “*Ḥalāl* food is food recommended for Muslim consumption” with 68.8%. From this result, it can be stated that the health workers in South West, Nigeria have good knowledge of *ḥalāl* concept by being strongly agreed 26.1% and agreed 42.7% that *ḥalāl* food is food recommended for Muslim consumption. 16.4% neutral, 11.2% disagreed and 3.6% strongly disagreed. The aggregate of strongly agreed and agreed is considered high and thus, suggests that health workers in South West, Nigeria possessed good knowledge of *ḥalāl* food concept.

The participants showed their knowledge of *ḥalāl* food with 24.8% strongly agreed and 36.4% agreed. This formed 61.2% of the respondents. They agreed to the statement “*ḥalāl* is anything that is permissible by *Sharī‘ah*. Only 3.2% strongly disagreed, 10.5% disagreed and 25.1% neutral.

Knowledge of health workers on *ḥalāl* food is depicted with the responses of the participants to the item “*Ḥalāl* food is food prepared under strict adherence to *Sharī‘ah* dietary law.” Food may be prepared in hygienic environment and animal is slaughtered but still not *ḥalāl* if *Sharī‘ah* is not upheld in the process. An aggregate of 61.2% supported the statement while 38.8% did not support. This reflects that many among the health workers do not know that there are conditions under which *ḥalāl* food should be processed as stipulated by *Sharī‘ah*.

Majority of the participants attested to the statement “Animal that is not slaughtered according to Islāmic rites is not edible for Muslim consumption” with 26.9% strongly agreed and 45.9% agreed. This formed the majority of the respondents (72.8%). It can be inferred that health workers understood that animal should be slaughtered in Islāmic way to make it edible for Muslim consumption. This has the highest percentage in the Table. This is because slaughter is mostly viewed by many people around the world as the major requisite that makes *ḥalāl* animal’s meat to remain *ḥalāl* for Muslim consumption and any animal that dies without being slaughtered is *ḥarām* for the Muslims.

Some level of knowledge of *ḥalāl* food regulations was displayed by health workers by their responses to item “NAFDAC regulations for animal slaughter cover Islāmic dietary law” as only 42.6% of the respondents considered NAFDAC regulations as

same with Islāmic dietary regulations. However, 57.4% did not support the statement. The result suggests that many among the health workers in South West, Nigeria considered NAFDAC approved food products consumable for Muslims and non-Muslims as they neglect spiritual status of food recommended for Muslim consumption.

It is depicted in the Table that 31.6% strongly agreed and 35.8% agreed to the statement “*Ḥalāl* animal must be slaughtered invoking Allāh’s name before the meat can be edible for Muslim consumption.” This formed 67.4% of the respondents and considered high. 22.1% were neutral, 8% agreed and 2.5% strongly disagreed. This formed only 24.6%. The result implies that many of the health workers accepted that it is important to pronounce Allāh’s name on the animal when it is being slaughtered to make it *Sharī‘ah* consumable.

Overall result in Table 5.4 indicates with average mean of (the variable) 3.691 that high numbers of health workers have good knowledge of *ḥalāl* food.



### 5.3.3 Perception of *halāl* food among health workers'

**Table 5.5: Distribution of responses and mean of health workers' perception of *halāl* food**

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Standard Deviation
<i>Halāl</i> food is good for both Muslims and non-Muslims	11 (2.1)	42 (8.0)	113 (21.5)	205 (39.0)	154 (29.3)	3.8552	.99904
Animal slaughtered following NAFDAC regulations is edible for Muslim consumption.	37 (7.0)	75 (14.3)	132 (25.1)	190 (36.2)	91 (17.3)	3.4248	1.14108
<i>Halāl</i> food prevents food poisoning.	26 (5.0)	88 (16.8)	108 (20.6)	186 (35.4)	117 (22.3)	3.5333	1.15305
<i>Halāl</i> food improves and sustains personal health.	28 (5.3)	79 (15.0)	117 (22.3)	171 (32.6)	130 (24.8)	3.5638	1.16821
<i>Halāl</i> food guarantees food safety.	34 (6.5)	66 (12.6)	123 (23.4)	186 (35.4)	116 (22.1)	3.5410	1.15445
<i>Halāl</i> food prevents food poisoning.	48 (9.1)	79 (15.0)	101 (19.2)	184 (35.0)	113 (21.5)	3.4476	1.23700

A total of 29.3.0% strongly agreed and 39.0% agreed to the statement “*ḥalāl* food is good for both Muslims and non-Muslims.” Only 2.1% strongly disagreed, 8.0% disagreed and 21.5% neutral. Strongly agreed and agreed formed 68.3% of the total respondents. It is considered high. This suggests that majority of the respondents considered *ḥalāl* food as beneficial not only to Muslims but also non-Muslims.

The results to the statement “Animal slaughtered following NAFDAC regulations is edible for Muslim consumption” demonstrated that 17.3% strongly agreed and 39.2% agreed. Only 7.0% strongly disagreed, 14.3% disagreed and 25.1.0% is neutral to the statement. The percentage of the supporters to the statement was 56.5%. This cannot be considered high. Thus, it indicates that many of the respondents have little knowledge of *ḥalāl* food. This suggests that there is a need for intensive sensitisation of health workers on *ḥalāl* food concept.

Also, 22.3% and 36.4% of the respondents agreed and strongly agreed that *ḥalāl* food prevents food poisoning. This indicates that 57.7% of the respondents agreed to the statement “*Ḥalāl* food prevents food poisoning.” Only 5.0% strongly disagreed, 16.8% disagreed and 20.6% neutral. It can be inferred that not very many health workers have the right perception of *ḥalāl* food concept in South West Nigeria. Safe food which is free of poison of any sort is the primary reason for the prescription of *ḥalāl* food by Allāh meaning that *ḥalālān tayyiban* is for the good of the consumers whether Muslims or non-Muslims.

Those who submitted to the statement “*Ḥalāl* food improves and sustains personal health” formed 57.4% of the respondents. However, 42.6% of the respondents did not accept the statement. This implies that while many among the health workers accepted that there is more health benefit from *ḥalāl* food, some did not see any special health benefit of *ḥalāl* food above non *ḥalāl* food. Thus, the health workers needed to be educated on *ḥalāl* food for more of them to develop right view towards it.

In the Table, it reflects that 22.1% and 35.4% which formed 57.5% of the respondents strongly agreed and agreed that *ḥalāl* food guarantees food safety. This formed the majority of the respondents. Only 6.5% strongly disagreed and 12.6% disagreed while 23.4% respondents were neutral in their responses to the item forming 42.5% which is also considerably high. This indicates that still, there are many health workers who did not have the right perception towards *ḥalāl* food.

Though, the Table depicts that many health workers had a high positive perception of *ḥalāl* food concept with an average variable mean of 3.5610, still, there were significant number of them who possessed negative perception of *ḥalāl* food. This suggests that there is a need for more enlightenment on *ḥalāl* food for the health workers in the South West Nigeria.

### 5.3.4 Awareness of *ḥalāl* slaughter among health workers'

**Table: 5.6: Distribution of responses and mean of health workers' awareness of *ḥalāl* slaughter**

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Standard Deviation
I am aware of <i>ḥalāl</i> way of slaughtering.	16 (3.0)	74 (14.1)	106 (20.2)	215 (41.0)	114 (21.7)	3.6419	1.06352
I have knowledge of <i>ḥalāl</i> slaughter.	31 (5.9)	55 (10.5)	109 (20.8)	210 (40.0)	120 (22.9)	3.6343	1.12041
I observe <i>ḥalāl</i> way of slaughtering at slabs during supervision.	34 (6.5)	75 (14.3)	131 (25.0)	201 (38.3)	84 (16.0)	3.4305	1.11437
Muslim slaughterers usually slaughter at slabs to make the meat <i>ḥalāl</i> for Muslims' consumption.	30 (5.7)	66 (12.6)	150 (28.6)	179 (34.1)	100 (19.0)	3.4819	1.10781
Animals are allowed to die off completely after slaughter before skinning.	14 (2.7)	69 (13.1)	87 (16.6)	241 (45.9)	114 (21.7)	3.7086	1.03231
Separate utensils are used for <i>ḥalāl</i> meat carcass.	50 (9.5)	89 (17.0)	134 (25.5)	178 (33.9)	74 (14.1)	3.2610	1.17808

In the Table, it reflects that 21.7% and 41.0% which indicates 62.7% of the respondents agreed that they were aware of *ḥalāl* way of slaughtering. This formed the majority of the respondents. Only a total of 17.1% disagreed that they were not aware of *ḥalāl* way of slaughtering while 20.2% of the respondents were neutral in their responses to the item. This implies that majority of the health workers were aware of *ḥalāl* slaughter. It indicates that there were still many of them who were not aware of *ḥalāl* slaughter. Thus, they need more education and exposure to the practice.

The Table shows an aggregate of (62.9%) who indicates that they have knowledge of *ḥalāl* slaughter. Majority of the respondents strongly agreed (40%) and agreed (22.9%) that they have knowledge of *ḥalāl* slaughter. Only 5.9% strongly disagreed, disagreed 10.5% and neutral 20.8% showed that they did not have knowledge of *ḥalāl* slaughter. The result shows that there were many health workers who had knowledge of *ḥalāl* slaughter.

Also, 16.0% and 38.3% which formed 54.3% of the respondents agreed that they observed *ḥalāl* way of slaughtering at slabs during supervision. A total of 45.8% reacted that they did not observe *ḥalāl* way of slaughtering at slabs during supervision. It can be inferred that many health workers did observe *ḥalāl* way of slaughtering animal at the slab during their supervision.

The Table depicts that 53.3% of the respondents claimed that they were aware that Muslim slaughterers usually slaughter at slabs to make the meat *ḥalāl* for Muslim consumption. 46.9% indicated that they did not observe whether only Muslim slaughterers usually slaughter at slabs. There is a close margin between the percentage of those who were aware and those who did not observe that Muslim slaughterers usually slaughter at slabs. The result reveals that not very many health workers cared to notice that Muslim slaughterers killed animals at the slabs.

Also, the Table shows that 67.6% of the respondents have the knowledge that Animals are allowed to die off completely after slaughter before skinning with 21.7% strongly agreed and 45.9% agreed. 2.7% strongly disagreed, 13.1% disagreed and 16.6% neutral to the statement meaning that they considered the animal dead immediately it was slaughtered. This exposes that many of the health workers were not so much aware of such requisite in *ḥalāl* slaughter.

It is shown in the Table that 48% of the respondents indicated that they knew that separate utensils were used for *ḥalāl* meat carcass. However, 9.5% strongly disagreed, 17.0% disagreed and 22.5% stayed neutral that they did not know or take notice of it. The result shows that many of the health workers did not have the knowledge that separate utensils should be used for *ḥalāl* meat carcass in *ḥalāl* slaughter.

Awareness of *ḥalāl* slaughter was high among the health workers in the South West, Nigeria with the average variable mean of 3.5263. However, the item statement “Animals are allowed to die off completely after slaughter before skinning” recorded the highest percentage (67.6%). Thus, this suggests that there is a need to create more awareness of *ḥalāl* slaughter among the health workers.

### 5.3.5 Knowledge of *ḥalāl* terms among health workers

**Table 5.7: Distribution of responses and mean of knowledge of health workers of *ḥalāl* terms**

I have knowledge of the following Arabic terms on *ḥalāl* food

Item	Yes	No	Mean	Standard Deviation
<i>Ḥalāl</i>	383 (73.0)	142 (27.0)	1.2705	.44463
<i>Ḥarām</i>	407 (77.5)	118 (22.5)	1.2248	.41782
<i>Sunnah</i>	302 (57.5)	223 (42.5)	1.4248	.49478
<i>Mustaḥabb</i>	143 (27.2)	382 (72.8)	1.7276	.44561
<i>Makrūh</i>	128 (24.4)	397 (75.6)	1.7562	.42979
<i>Shubhāt</i>	95 (18.1)	430 (81.9)	1.8190	.38535
Tayyib	133 (25.3)	392 (74.7)	1.7467	.43533
<i>Ḥalālan Tayyiban</i>	131 (25.0)	394 (75.0)	1.7505	.43315
<i>Al-khabīthāt/al-khabā'ith</i>	64 (12.2)	461 (87.8)	1.8781	.32749
<i>Dhibḥ</i>	75 (14.3)	450 (85.7)	1.8571	.35026
<i>Dhabīhah</i>	58 (11.0)	467 (89.0)	1.8895	.31378
<i>Maytah</i>	93 (17.7)	432 (82.3)	1.8229	.38215
<i>Al-damm</i>	71 (13.5)	454 (86.5)	1.8648	.34230
<i>Khinzīr</i>	71 (13.5)	454 (86.5)	1.8648	.34230
<i>Al-khamr</i>	69 (13.1)	456 (86.9)	1.8686	.33819
<i>Bahīmah al-an'ām</i>	60 (11.4)	465 (88.6)	1.8857	.31846

A gross number of the health workers had low knowledge of the meanings of many Arabic terms on *ḥalāl* food as depicted in Table 5.7 with an average variable mean of 1.7282. *Ḥalāl*, *ḥarām* and *Sunnah* with 73%, 77.5% and 57.5% respectively were the most common terms that the majority of the respondents among the health workers were familiar with.



**Table 5.8: Pearson Correlation analysis of each of the variables (awareness of *ḥalāl* food (AHF); knowledge of *ḥalāl* food (KHF) and awareness of *ḥalāl* slaughter (AHS) on perception of *ḥalāl* food (PHF) of health workers**

	Mean	Std Dev	PHF	AHF	KHF	AHS
PHF	21.36	5.39	1.0			
AHF	29.06	6.08	.627	1.0		
KHF	22.14	4.40	.640	.694	1.0	
AHS	21.15	4.68	.690	.628	.599	1.0

**Dependent Variable: Perception**

The Table above shows that there was significant relationship between each of the independent variables: awareness of *ḥalāl* food ( $r = .627$ ,  $p < 0.05$ ); knowledge of *ḥalāl* food ( $r = .640$ ,  $p < 0.05$ ) and awareness of *ḥalāl* slaughter ( $r = .690$ ,  $p < 0.05$ ) and perception of *ḥalāl* food among the participants. Awareness and knowledge of *ḥalāl* food shows positive correlations with their perception of *ḥalāl* food. Their awareness of *ḥalāl* slaughter also recorded a positive significance on their perception of *ḥalāl* food. This shows the implications of the consciousness of the Muslim consumers in consuming *ḥalāl* food particularly *ḥalāl* meat. This reflects the environmental influence on the health workers who were evenly dominated by Muslims and Christians.

#### 5.4 Research question 4

To what extent can awareness of *ḥalāl* food, knowledge of *ḥalāl* food and awareness of *ḥalāl* slaughter have significant influence on the perception of health workers of *ḥalāl* food?

**Table 5.9: Multiple regression analysis on joint contribution of variables on perception *ḥalāl* food of health workers**

Multiple R = 0.756 Multiple R <sup>2</sup> = 0.571 Multiple R <sup>2</sup> (Adjusted) = 0.569 Standard Error of Estimate = 3.54203					
Source of Variance	Sum of Square	Df	Mean of Square	F-Ratio	P
Regression	8699.347	3	2899.782	231.133	<0.05
Residual	6536.436	521	12.546		
Total	15235.783	524			

**Dependent Variable: Perception**

Table above shows that there was joint effect of the independent variables (awareness of *halāl* food (AHF); knowledge of *halāl* food (KHF) and awareness of *halāl* slaughter (AHS) on the perception of *halāl* food of health workers in the study area ( $R = 0.756$ ,  $p < .05$ ). The combination of the independent variables accounted for 56.9% (adjusted  $R^2 = 0.569$ ) of the total variance in the prediction towards the perception *halāl* food of health workers. The analysis of variance of the multiple regression data yielded an F-ratio value which was found to be significant at 0.05 Alpha level ( $F = 231.133$ ,  $P < 0.05$ ). This shows that the independent variables jointly contributed to the perception *halāl* food of health workers.

**Table 5.10: Multiple regression analysis of each of the variables (awareness of *ḥalāl* food (AHF); knowledge of *ḥalāl* food (KHF) and awareness of *ḥalāl* slaughter (AHS) on perception of *ḥalāl* food (PHF) of health workers**

	Unstandardised Coefficient		Standardised Coefficient	T	Sig.	Remark
	B	Std Error	Beta			
(Constant)	-.641	.864		-.741	.459	Not Sig.
AHF	.160	.038	.181	4.224	.002	Sig.
KHF	.323	.051	.264	6.335	.000	Sig.
AHS	.482	.044	.418	10.858	.000	Sig.

**Dependent Variable: Perception**

The table above depicts the contribution of each of the independent variables to the prediction of perception of health workers' perception of *halāl* food. The result reveals that there was significant relationship between each of the variables and health workers' perception of the consumption of *halāl* food in the South West, Nigeria. In terms of magnitude of the contribution, awareness of *halāl* slaughter contributed most to the prediction ( $\beta = 0.418$ ,  $t = 10.858$ ,  $p < 0.05$ ) followed by knowledge of *halāl* food ( $\beta = .264$ ,  $t = 6.335$ ,  $p < 0.05$ ) and awareness of *halāl* food ( $\beta = .181$ ,  $t = 4.224$ ,  $p < 0.05$ ). This revealed that the null hypothesis was rejected.

**Table 5.11** T.Test Table showing the extent of effect of demographic factor (gender) of the health workers on awareness, knowledge and perception of *halāl* food

	<b>Gender</b>	<b>N</b>	$\bar{X}$	<b>Std.</b>	<b>Df</b>	<b>T</b>	<b>Sig.</b>
AKP	Male	261	72.3908	13.75893	523	-298	.766
	Female	264	72.7538	14.12990			

The result from the Table reveals that there was no significant relationship between gender and awareness, knowledge and perception of health workers of *halāl* food ( $t(523) = -298$   $p > 0.05$ ). Male ( $\bar{X} = 72.3908$ ,  $SD = 13.75893$ ) and female ( $\bar{X} = 72.7538$ ,  $SD = 14.12990$ ).



**Table 5.12: ANOVA showing the extent of effect of demographic factors of the health workers on awareness, knowledge and perception of *halāl* food**

		Sum of Square	Df	Mean Square	F	Sig.
Ethnicity* awareness, knowledge and perception	Between Groups	2639.282	3	879.761	4.625	.003
	Within Groups	99107.146	521	190.225		
	Total	101746.427	524			
Age* awareness, knowledge and perception	Between Groups	4411.611	7	630.230	3.348	.002
	Within Groups	97334.815	517	188.269		
	Total	101746.427	524			
Religion* awareness, knowledge and perception	Between Groups	42425.516	3	14141.839	124.204	.000
	Within Groups	59320.910	521	113.860		
	Total	101746.427	524			
Level of education* awareness, knowledge and perception	Between Groups	4812.874	4	1203.219	6.455	.000
	Within Groups	96933.552	520	186.411		
	Total	101746.427	524			

Result from the Table above shows the influence of demographic factors of health workers on the awareness, knowledge and perception of *halāl* food. The result reveals that there was significant influence of ethnicity on awareness, knowledge and perception of *halāl* food ( $F(3,521) = 4.625, P < 0.05$ ), age also had significant influence ( $F(7, 517) = 3.348, P < 0.05$ ), religion was also significant ( $F(3,521) = 124.204, P < 0.05$ ) as well as level of education ( $F(4,520) = 6.455, P < 0.05$ ), It could be concluded that there were significant influences of demographic factors of health workers on their awareness, knowledge and perception of *halāl* food.

Abdul Kkaleeq (2015) affirmed that there was significant relationship between gender and attitude towards behavioural intention of Muslim consumers. This was affirmed from her research carried out among 452 respondents from among Generation Y, in five Malaysian private universities. This result contradicts the finding of her study as gender has no significant relationship between awareness, knowledge and perception of health workers towards *halāl* food. The reason might be that her research was carried out mainly among the university students who were predominantly youths.

**Table 5.13: ANOVA showing the influence of *ḥalāl* knowledge on the awareness of health workers of *ḥalāl* slaughter**

		Sum of Square	Df	Mean Square	F	Sig.
Halal knowledge* awareness of <i>halal</i> slaughter	Between Groups	1997.785	7	285.398	15.538	.000
	Within Groups	9496.093	517	18.388		
	Total	11493.878	524			

Result from the Table above shows the influence of knowledge of *halāl* food to the awareness of health workers towards *halāl* slaughter. The result reveals that there was significant influence of *halāl* knowledge to the awareness of health workers towards *halāl* slaughter ( $F(7,517) = 15.538, P < 0.05$ ). This implies that the extent of significance of *halāl* knowledge of *halāl* to the awareness of health workers towards *halāl* slaughter is to a great extent.

The finding of this study supports the result of “A study of Muslim Consumer Awareness on JAKIM *Halāl* Logo” conducted by Nor (2014) among 300 Muslim consumers in Malaysia sampled through convenient sampling which submitted that *halāl* knowledge played a significant relationship with awareness.

## 5.5 Analysis of hypotheses

**H<sub>0</sub>:** There is no significant relationship between demographic profiles and awareness, knowledge and perception on *halāl* food among the health workers.

**Table 5.42: Correlation matrix showing the relationship between demographic profiles and awareness, knowledge and perception of *halāl* food among the health workers**

Variables	1	2	3	4	5	6	7	Mean	SD
Awareness, knowledge and perception of <i>halāl</i> food	1							72.573	13.934
Gender	.013	1						1.503	.500
Ethnicity	-.104*	-.041	1					1.095	.473
Age	-.101*	-.107*	.009	1				3.848	1.564
Religion	-.602**	-.013	.126**	.113**	1			1.537	.550
Level of education	-.181**	-.048	-.003	.379**	.157**	1		3.810	.765
State of residence	-.107*	.015	.077	-.065	-.073	.068	1	3.531	1.701

Result from Table above shows that five independent variables (ethnicity, age, religion, level of education and state of residence) had a significant positive relationship with the dependent variable (awareness, knowledge and perception) of health workers. Ethnicity was significant:  $r(523) = -.104, p < 0.05$ , age was significant  $r(523) = -.101, p < 0.05$ , religion  $r(523) = -.602, p < 0.05$ , level of education  $r(523) = -.181, p < 0.05$ , state of residence  $r(523) = -.107, p < 0.05$ , while gender  $r(523) = -.181, p > 0.05$ , did not have significant relationship with awareness, knowledge and perception) of health workers. The stated hypothesis is therefore rejected.

**H:** There is no significant relationship between *ḥalāl* knowledge and *ḥalāl* slaughter among the health workers.

**Table 5.15: Summary of correlation analysis showing the relationship between *ḥalāl* knowledge and *ḥalāl* slaughter among the health workers**

Variables	Mean	Std. Dev	N	Df	R	P	Remark
<i>Ḥalāl</i> knowledge	21.1581	4.68347	525	523	-.010	0.812	Not. sig.
<i>Ḥalāl</i> slaughter	4.7733	1.73207					

Result from Table 5.3.13 shows that there was no significant relationship between *ḥalāl* knowledge and *ḥalāl* slaughter among the health workers in the South West, Nigeria ( $r = 0.812$ ;  $p > 0.05$ ). This implies that *ḥalāl* knowledge did not influence *ḥalāl* slaughter among the health workers. Hence, the null hypothesis is accepted.



## 5.6. Summary

This segment answers research question four. Table 5.9 depicts that awareness of *ḥalāl* food, knowledge of *ḥalāl* food and awareness of *ḥalāl* slaughter significantly contributed positively to the perception of health workers of *ḥalāl* food. The descriptive statistics reveal that awareness, knowledge and perception of health workers were at the average. The findings also indicate that there was significant influence of demographic factors of health workers towards awareness, knowledge and perception of *ḥalāl* food. Only gender did not have significant effect on health workers towards awareness, knowledge and perception of *ḥalāl* food. Also, the findings from the ANOVA result show that *ḥalāl* knowledge played a significant impact in influencing health workers on *ḥalāl* slaughter as depicted in Table 5.13

The findings indicate that there was significant relationship with the demographic factors of health workers, except gender, towards awareness, knowledge and perception of *ḥalāl* food. The result from the test of hypothesis reveals in Table 5.14 that awareness of *ḥalāl* food, knowledge of *ḥalāl* food and awareness of *ḥalāl* slaughter had significant relationship with the perception of health workers of *ḥalāl* food. Further test of hypothesis as contained in Table 5.14 reveals that there was significant relationship between demographic profiles- ethnicity, age, religion, level of education, and state of residence and awareness, knowledge and perception of health workers towards *ḥalāl* food. Also, Table 5.15 indicates that there was no significant relationship between *ḥalāl* knowledge and *ḥalāl* slaughter among the health workers in the South West, Nigeria ( $r = 0.812$ ;  $p > 0.05$ ).

## 5.7 *Ḥalāl* certification bodies' interviews

This segment presents the responses of the participants in the interviews. Eight interviewees, who were the CEOs and other members of five *ḥalāl* certification bodies in South West, Nigeria participated in the interviews. The interviews took three phases- face-to-face, telephone and mail interviews. A face-to-face interview was conducted with four interviewees, mail survey was conducted with one interviewee and telephone interview was conducted with three interviewees. The telephone and mail interviews were conducted because the interviewees could not be reached during the period of the interview and chose to respond to the interview on phone conversation and in writing as applicable. The interview was designed to address research question 5 and to achieve objective 5 of the research. The interview consists

of four questions. The *ḥalāl* certification bodies are tagged with letters A, B, C, D and E while pseudonyms are used to report the interviews. Olokuta was a respondent from *ḥalāl* certification body A; Al-Turabi and Abulesoro were interviewees from *ḥalāl* certification body B; Esusu from body C; Kenike and Ogiriosa from body D while Ajakuta and Tatiwere were from Body E.

**Research question 5:**

How compliant are the standards of operation of *ḥalāl* certification bodies with *Sharī‘ah* food guidelines?

**5.7.1 Accreditation of *ḥalāl* certification organ/body**

**Are you accredited by any accreditation agency/body? If yes, by which body? If no, then how do you set your *ḥalāl* regulations and who constitute your certification team?**

There is no *ḥalāl* certification body which was accredited by any *ḥalāl* accreditation agency or body. The situation is equal to all the bodies interviewed. Majority of the certification bodies claimed to have links with the international *ḥalāl* certification bodies but these bodies do not have control over their activities. The certification bodies only contact them when they need their services. The link was because some of their auditors received training from the international *ḥalāl* accreditation bodies outside countries such as Pakistan and Malaysia. Olokuta said that their *ḥalāl* certification body registered with a body and it signed Memorandum of Understanding with three food regulatory bodies. Body D claimed to have been charged by Nigeria Supreme Council for Islāmic Affairs with the responsibility of *ḥalāl* certification in South West, Nigeria. However, the company was not accredited by any *ḥalāl* certification body. Body B does not see it necessary to be certified or accredited by any accredited body since it is autonomous. Ogiriosa said that their rules and regulations are formulated by Islāmic and scientific scholars from different background. Let us look at this situation from three respondents:

#### **5.7.1.1 Olokuta (Face to face interview)**

We have applied for accreditation with an international *ḥalāl* accreditation body. The registration is still under processing. The auditors were trained in Malaysia and apart from the fact that we were trained in Malaysia. We set the rules by ourselves based on the Malaysia Standard. We come with Malaysia standard and modified it to suit Nigeria situation. For example, many chickens are slaughtered at once by a machine. That is mechanical slaughter. It is allowed but we have not got to that stage in Nigeria. We still liaise with foreign *ḥalāl* food accreditation body so that we ensure all our products are certified based on international *ḥalāl* standards. We do send some complex food products to them for laboratory test. We registered with Corporate Affairs Commission, Nigeria. We also signed Memorandum of Understanding with three regulatory bodies. These are FIIR Federal Institute for Industrial Research, Oso, SON Standard Organisation of Nigeria and NAFDAC.

#### **5.7.1.2 Kenike (Telephone interview)**

The body has been charged the duty to certify food as *ḥalāl* by National Supreme Council for Islamic Affairs. Aside that, our auditors received training from Pakistan based certification bodies. However, we set our regulations that we follow.

#### **5.7.1.3 Al-Turabi (Telephone interview)**

Our *ḥalāl* certification body is autonomous, so no accreditation *ḥalāl* Body supervises its activities particularly activities that have something to do with South West, Nigeria, even though it is under the umbrella of Nigeria Supreme Council for Islamic Affairs. Currently, MUSWEN has no link with any international

*halāl* accreditation body. MUSWEN sets the rules and standards for the certification.

#### **5.7.1.4 Ogiriosa (Mail interview)**

We are emerging company from abroad. InshaAllah, this year we are kicking off the business. There is no body in Nigeria at present that accredits the *halāl* certification organisation. However, there are many accrediting bodies in Malaysia, UAE, UK, etc that do the job.

The rules and regulations are formulated by Islāmic and scientific scholars from different background. In Nigerian context, we adopt some rules and regulations from the existing ones to tailor them to our country.

It can be interpreted that none of the *halāl* certification bodies is accredited by any *halāl* certification agency. Therefore, there is no unified standard for *halāl* certification operation in South West, Nigeria, meaning that the operation standard for *halāl* food certification bodies in South West, Nigeria is at variance. Despite the fact that majority of the certification bodies have proficient and qualified *halāl* food auditors trained from outside countries, each of the *halāl* certification bodies operates autonomously on its own auspices and standards. This implies that the standard of one can be considered sub-standard by the other. This situation can give room for *halāl* certification and *halāl* logo fraudulence and reduces the integrity of certified *halāl* food products.

#### **5.7.2 Process of application and certification**

##### **What are processes of application and procedures for certification?**

From the responses of two of the interviewees, the application procedures vary from one certification body to the other but with some commonalities. Some certification bodies first request for letter of expression of interest to show that the certifying

company is not forced or compelled to apply after which the company submits the application form. The documents are verified, the products processes are assessed and the premises and facilities are inspected to ensure that *halāl* food production laws and ethics could be sincerely observed and adhered to by the food companies. This is buttressed by the responses of Olokuta.

#### **5.7.2.1 Olokuta (Face to face interview)**

Our processes start with a letter of expression of interest that shows they are the one who requested for the certification, application form and introductory letter. There are some basic things we need in terms of processes. For instance in NASCO biscuit, we look at their raw material, production line, their laboratory, water system, the effluence that is the waste water passage. We look at their suppliers whether they even have COA, we look at their cloak rooms, bath room, their canteens. We look at documentation.

#### **5.7.2.2 Al-Turabi (Telephone interview)**

The companies were only requested to write application for certification of their products/companies. We ensure that the food products are acceptable for human and Muslim consumption. The slaughter is done in our presence. We examined the animal feeds. The feeds are examined by the experts in poultry feeds. We do not sample the materials for laboratory test. We examined how cocoa is preserved and packaged for exportation. We inspected the environments very carefully to see that it is clean.

### **5.7.3 Issuance of certificate and *ḥalāl* logo**

#### **Do you issue certificate and *ḥalāl* logo to the certified companies?**

Tatiwere said that they issued certificates to the companies but they did not consider the issue of *ḥalāl* logo then. Esusu in his response said that they have *ḥalāl* certificate and *ḥalāl* logo for companies they certify but at present, they have not certified any company. The responses of Olokuta and Abulesoro were quoted below:

#### **5.7.3.1 Olokuta (Face to face interview)**

“Yes, we give them certificate and logo. We have *ḥalāl* food logo that bears our trademark. This is already in the circulation on products that we have certified *ḥalāl*.”

#### **5.7.3. Abulesoro (Telephone interview)**

“Yes, we issue certificate to the three poultry farms that we have supervised and certified. We have *ḥalāl* logo. We use MUSWEN logo for *ḥalāl* logo for certified food companies. The certification body has a logo of its own.”

### **5.7.4 Post certification supervision**

#### **Do you embark on follow-up supervisions and are there any internal auditors in the companies you have certified *ḥalāl*?**

If yes, what form does the supervision take and are the internal auditors Muslims?

There is need for post certification supervision to ensure that the certified companies comply with the *Sharī‘ah* dietary law under the condition which the companies were certified. Most of the certification bodies have not been carrying out follow-up supervision exercise. It is indicated from the responses obtained from the interviewees that only one food company has a *ḥalāl* trained internal auditor. However, the respondents could not ascertain whether the auditors were Muslims or not at the time of the interviews.

#### **5.7.4.1 Olokuta (Face to face interview)**

The certification is renewable annually. However, we carry out supervision for surveillance periodically. Most of the certified companies do not have internal *ḥalāl* food auditor, only one of those that we have supervised has trained *ḥalāl* workers. At present, I can't say whether the auditors are Muslims or not, or whether they consist of Muslims and non-Muslims together.

#### **5.7.4.2 Ajakuta (Face to face interview)**

No. We did not carry out follow-up supervision as your question posed it. We have not been carrying out further supervision after the companies have been certified. They don't have internal *ḥalāl* food auditors.

Majority of the certification bodies have not been carrying out follow-up supervision with the companies they have certified. Also, most of the *ḥalāl*-certified food companies do not have *ḥalāl* trained internal auditor a result of which can bring about violation of *Sharī'ah* food rules and ethics in such certified food companies. This means that achieving the objective of *ḥalāl* food certification is not guaranteed.

The outcomes of the interviews show that none of the operating *ḥalāl* food certification bodies in South West Nigeria was certified by any accreditation body or agency. It reflects that there is no agency/body that stands for accreditation of certification bodies before such bodies start operations. Each certification body set out its own policy, rules and regulations that guide its operation. Application processes and certification procedures vary from one certification body to the other. Most of the certification bodies did not carry out follow-up supervision and also, majority of the certified food companies do not have *ḥalāl* internal auditors whether Muslims or non-Muslims. Most of the certified food companies do not apply for annual renewal of their *ḥalāl* certificate of operation. It could be concluded that most of the *ḥalāl* food certification bodies in South West, Nigeria are at the infancy stage, thus, their standard of operation in line with *Sharī'ah* food laws is ineptitude.

## 5.9 Focus Group Discussion Reports

The health workers were not aware of Islamic provisions, such as an animal should not be slaughtered in the presence of other animals; animals are allowed to rest after long distance of conveyance before they are slaughtered; *Ḥalāl* animal must be slaughtered invoking Allāh's name before the meat can be edible for Muslim consumption; Blood must be allowed to gush out completely from the body of the slaughtered animal before post slaughter processing commences and an animal must be slaughtered with a single swift slit

However, they were aware that *ḥalāl* food can improve and sustain a consumer's health. They also knew the meaning of *ḥalāl*, *ḥarām* and *sunnah*. All these were obtained during the FGD with the health workers.

One health worker discussing at one of the FGDs said: 'I am only aware of *ḥalāl*, *ḥarām* and *sunnah*. Those are the words I have been hearing from Muslims. I don't know that there are other Arabic words that refer to *ḥalāl* food'. Most of the FGD discussants nodded to show that they knew those three words.

Virtually, all the food workers (both primary and processed) discussing at one of the the FGDs said they understood the *Sharī'ah* compliant foods and non-*Sharī'ah* compliant foods, such as *khinzīr* (pork) and *maytatah* (carrion). One of them said: 'foods, such as rice, yam, beans and maize are in line with the dictates of Islam because imams and alfas (Islamic clerics) eat them. Pork and carrion are against the teachings of Islam. We all know that'. They all said in chorus i.e in unison: 'Yes o'.

## 5.10 Summary

The first segment reports the findings among the health workers. Three sections of health workers were involved in this study. They comprise Water and Environmental Sanitation unit, National Food and Drugs Administration Commission and Veterinary units. The participants consist of 261 (49.7%) males and 264 (50.3%) females. A total of 253 (48.2%) respondents were Muslims while 266 (50.7%) were non-Muslims. The result indicates that majority of the health workers possessed Bachelor Degree/HND and NCE/OND certificates as 58.7% of the respondents possessed Bachelor Degree Certificate and 20.6% possessed NCE/OND certificates. Majority of the respondents were between the age of 31 and 45. The respondents were dominated by Yoruba group with 501 (95.4%). The respondents acquired *ḥalāl* knowledge majorly from Islāmic



programmes such as *ta'lim*, *adhkaar* and *asalat* programmees with 25.7% and from mosques with 23.8%. The result reveals that 50.5%, 30.1% and 18.3% among water supply and environmental, veterinary and NAFDAC units of health workers participated respectively. The findings reveal that awareness and knowledge of *halāl* food, awareness of *halāl* slaughter had significant influences on the perception of health workers towards *halāl* food.

The second segment of this chapter presents the report of the interviews and focus group discussions with the *halāl* certification bodies and food service providers in South West, Nigeria. It is indicated from the findings of the interview that the certification bodies currently operate at individual level without being accredited by any umbrella body. Each body set its own *halāl* food certification regulations. Not all the certification bodies have certified *halāl* trained auditors. Majority of the certification bodies have not been carrying out post certification supervision on the certified food companies. Also, majority of the certified food companies did not have *halāl* internal auditors. The result from the interviews answers research question five (5) and takes care of research objective five (5) by submitting that the standard of operation of the certification bodies in South West, Nigeria in line with Shari'ah dietary laws is at infancy stage. The third segment depicts the result of the focus group discussion.

## **5.11 Summary of research questions and hypotheses**

### **5.10.1 Rresearch questions**

**Question 1: To what extent can awareness of *halāl* food, knowledge of *halāl* food, attitude, subjective norms, perceived behavioural control, behavioural intention and religiosity, perception of *halāl* certification and logistics possessed by Muslim consumers influence their perception of *halāl*?**

Table 4.15 shows that there was joint effect of the independent variables (awareness of *halāl* food (AHF); knowledge of *halāl* food (KHF); attitude towards *halāl* food (ATHF); subjective norms (SN); perceived behavioural control (PBC); behavioural intention (BI); religiosity (REL.); perception of *halāl* certification (PHC) and perception of *halāl* logistics (PHL) and perception of *halāl* food (PHF) of the Muslim consumers in the study area ( $R = 0.730$ ,  $p < .05$ ). The combination of the independent

variables accounted for 53.1% (adjusted  $R^2 = 0.531$ ) of the total variance in the prediction towards perception of *ḥalāl* food (PHF) of the Muslim consumers. The analysis of variance of the multiple regression data yielded an F-ratio value which was found to be significant at 0.05 Alpha level ( $F = 280.317, P < 0.05$ ). This shows that the independent variables jointly contributed to perception of *ḥalāl* food (PHF) of the Muslim consumers.

**Question 2: To what extent can awareness of *ḥalāl* food, knowledge of *ḥalāl* food, knowledge of *ḥalāl* slaughter, awareness of *ḥalāl* certification and perception of *ḥalāl* certification and logistics affect the perception of primary food workers of *ḥalāl* food?**

Table 4.32 shows that there was joint effect of the independent variables (awareness of *ḥalāl* food (AHF); knowledge of *ḥalāl* food (KHF); Knowledge of *Ḥalāl* Slaughter (KHS); Awareness of *Ḥalāl* Certification (AHC); Perception of *Ḥalāl* Certification (PHC) and perception of *ḥalāl* logistics (PHL) and primary food workers' perception towards *ḥalāl* food in the study area ( $R = 0.686, p < .05$ ). The combination of the independent variables accounted for 45.9% (adjusted  $R^2 = 0.459$ ) of the total variance in the prediction towards the primary food workers' perception of *ḥalāl* food. The analysis of variance of the multiple regression data yielded an F-ratio value which was found to be significant at 0.05 Alpha level ( $F = 41.866, P < 0.05$ ). This shows that the independent variables jointly contributed to primary food workers' perception of *ḥalāl* food.

**Question 3: To what extent can awareness of *ḥalāl* food, knowledge of *ḥalāl* food, perception of *ḥalāl* certification, perception of *ḥalāl* logo and logistics influence the perception of processed food workers on *ḥalāl* food?**

Table 4.48 shows that there was joint effect of the independent variables-awareness of *ḥalāl* food (AHF); perception of *ḥalāl* certification (PHC); perception of *ḥalāl* logo (PHLo); knowledge of *ḥalāl* food (KHF); and perception of *ḥalāl* logistics (PHL) and processed food workers' perception of *ḥalāl* food in the study area ( $R = 0.842, p < .05$ ). The combination of the independent variables accounted for 70.0% (adjusted  $R^2 = 0.700$ ) of the total variance in the prediction towards the processed food workers' perception of *ḥalāl* food. The analysis of variance of the multiple regression data yielded an F-ratio value which was found to be significant at 0.05 Alpha level ( $F =$

82.249,  $P < 0.05$ ). This shows that the independent variables jointly contributed to processed food workers' perception of *halāl* food.

**Question 4: To what extent can awareness of *halāl* food, knowledge of *halāl* food and awareness of *halāl* slaughter have significant influence on the perception of health workers towards *halāl* food?**

Table 5.9 shows that there was joint effect of the independent variables- Awareness of *Halāl* Food (AHF); Knowledge of *Halāl* Food (KHF) and Awareness of *Halāl* Slaughter (AHS) on the Perception of *Halāl* Food (PHF) of health workers in the study area ( $R = 0.756$ ,  $p < 0.05$ ). The combination of the independent variables accounted for 56.9% (adjusted  $R^2 = 0.569$ ) of the total variance in the prediction towards the perception of *halāl* food of health workers. The analysis of variance of the multiple regression data yielded an F-ratio value which was found to be significant at 0.05 Alpha level ( $F = 231.133$ ,  $P < 0.05$ ). This shows that the independent variables jointly contributed to perception of *halāl* food of health workers.

**Question 5: How compliant are the standards of operation of *halāl* certification bodies with *Sharī'ah* food guidelines?**

The interviews result indicates that the level of compliance of the the standard of operation of the *halāl* certification bodies in South West, Nigeria is low as many of the certification bodies do not have *halāl* trained auditors and majority who claimed to have certified *halāl* trained auditors have not certified any food company as at the time of the interview. Most of the certified food companies do not have trained *halāl* internal auditors and most of them are not being supervised by the certification bodies after the first certification approval.

### **5.10.2 Results of hypotheses**

The hypotheses are tested. Multiple Linear Regression was used in finding the relationship between the independent and dependent variables of the study.

**H<sub>0</sub>1: There is no significant relationship between awareness, knowledge of *halāl* food, attitude, subjective norms, perceived behavioural control, behavioural**

**intention and religiosity, perception of *ḥalāl*c certification and logistics possessed by Muslim consumers influence their perception of *ḥalāl*?**

Among the nine independent variables employed for the prediction of Muslim consumers' perception of the consumption of *ḥalāl* food, only subjective norms, perceived behavioural control and *ḥalāl* logistics did not have significant contributions to their perception of consumption of *ḥalāl* food as depicted in Table 6.14. In terms of magnitude of the contribution: behavioural intention was the most potent contributor towards the perception of *ḥalāl* food (PHF) of the Muslim consumers ( $\beta = .294$ ,  $t = 12.577$ ,  $p < 0.05$ ), this was followed by awareness ( $\beta = .262$ ,  $t = 14.408$ ,  $p < 0.05$ ), attitude ( $\beta = .124$ ,  $t = 5.066$ ,  $p < 0.05$ ), knowledge of *ḥalāl* food ( $\beta = .122$ ,  $t = 5.676$ ,  $p < 0.05$ ), certification ( $\beta = .084$ ,  $t = 3.546$ ,  $p < 0.05$ ) followed by religiosity ( $\beta = 0.050$ ,  $t = -2.523$ ,  $p < 0.05$ ) positively contributed to the Muslim consumers' perception of *ḥalāl* food consumption. Thus, the null hypothesis is rejected.

**H<sub>02</sub>** Hypothesis 2 was partially rejected as depicted in Table 4.18 that gender, age and occupation have significant relationship with awareness, knowledge and perception of *ḥalāl* food while ethnicity and state of residence do not had significant relationship with awareness, knowledge and perception of *ḥalāl* food among Muslim consumers..

**H<sub>03</sub> There is no nsignificant relationship between awareness, knowledge, awareness of *ḥalāl* certification and perception of *ḥalāl* certification affect the perception of primary food workers in patronising *ḥalāl* food?**

The results shown in Table 4.36 reveals that three of the variables contributed to the prediction while three variables were insignificant towards primary food workers' perception in the consumption of *ḥalāl* food in South West, Nigeria. Awareness of *ḥalāl* food is revealed to be a potent contributor to perception of *ḥalāl* food of the primary food workers with ( $\beta = 0.357$ ,  $t = 6.068$ ,  $p < 0.05$ ), this was followed by perception of *ḥalāl* certification ( $\beta = .192$ ,  $t = 3.0663$ ,  $p < 0.05$ ), perception of *ḥalāl* logistics (PHL) ( $\beta = .172$ ,  $t = 2.898$ ,  $p < 0.05$ ). While knowledge of *ḥalāl* food ( $\beta = .124$ ,  $t = .952$ ,  $p > 0.05$ ), knowledge of *ḥalāl* slaughter (KHS) ( $\beta = .012$ ,  $t = .237$ ,  $p > 0.05$ ) and awareness of *ḥalāl* certification (AHC) ( $\beta = .010$ ,  $t = .223$ ,  $p > 0.05$ ) contributed towards perception of *ḥalāl* food of the primary food workers but not significant. Thus the null hypothesis is partly rejected.

**H<sub>04</sub>** Table 4.36 shows that age is significant:  $r(288) = .198, p < 0.05$ , and religion:  $r(288) = -.384, p < 0.05$ . While gender,  $r(288) = -0.066, p > 0.05$ , ethnicity  $r(288) = -0.076, p > 0.05$ , level of education  $r(288) = -0.037, p > 0.05$ , section  $r(288) = -0.014, p > 0.05$ , and state of residence  $r(288) = -0.063, p > 0.05$  did not have significant relationship with awareness, knowledge and perception of *halāl* food among primary food worker. Thus, hypothesis 6 is significantly accepted.

**H<sub>05</sub> There is no significant relationship between awareness, knowledge, *halāl* certification, perception of *halāl* logo and logistics influence the perception of processed food workers on *halāl* food?**

The contribution of the variables used to predict the perception of processed food workers towards *halāl* food consumption are displayed in Table 4.52 The results revealed that only *halāl* logo and knowledge of *halāl* food possessed by the processed food workers had significant contributions to their perception towards *halāl* food consumption with *halāl* logo ( $\beta = .376, t = 4.260, p < 0.05$ ) and knowledge ( $\beta = .361, t = 4.425, p < 0.05$ ). However, awareness of *halāl* food was not significant ( $\beta = .034, t = 531, p > 0.05$ ), perception of *halāl* logo did not significantly predict the perception of *halāl* food of the processed food workers food workers. Also perception of *halāl* logistics did not significantly predict perception of *halāl* food of the processed food workers ( $\beta = .114, t = 1.874, p > 0.05$ ).

**H<sub>06</sub>** The results from Table 4.52 establish that the null hypothesis 6 is significantly rejected. Gender, ethnicity, religion and position have significant relationship with awareness, knowledge and perception. Age, level of education and state of residence did not have significant relationship with awareness, knowledge and perception of *halāl* food among processed food workers.

**H<sub>07</sub> There is no significant relationship between awareness of *halāl* food, knowledge of *halāl* food and awareness of *halāl* slaughter and perception of health workers towards the patronage of *halāl* food?**

The table 5.14 depicts the contribution of each of the independent variables to the prediction of perception of health workers' perception of *halāl* food. The result reveals that there was significant relationship between each of the variables and health workers' perception towards the consumption of *halāl* food in South West, Nigeria. In

terms of magnitude of the contribution, awareness of *halāl* slaughter contributed most to the prediction ( $\beta = 0.418$ ,  $t = 10.858$ ,  $p < 0.05$ ) followed by knowledge of *halāl* food ( $\beta = .264$ ,  $t = 6.335$ ,  $p < 0.05$ ) and awareness of *halāl* food ( $\beta = .181$ ,  $t = 4.224$ ,  $p < 0.05$ ). Thus, the null hypothesis is rejected.

**H<sub>08</sub>** There is significant relationship between ethnicity, age, religion, level of education and state of residence and awareness, knowledge and perception of health workers as depicted in Table 5.15. Only gender  $r(523) = -.181$ ,  $p > 0.05$ , did not have significant relationship with awareness, knowledge and perception of health workers. Thus, hypothesis 8 is, therefore, significantly rejected.

## CHAPTER SIX

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 6.1 Summary of the thesis

This chapter presents the summary and conclusion of the study and suggests some recommendations. The study explores the correlates of *ḥalāl* food among Muslim consumers, food service providers and health workers to bring about effective administration of *ḥalāl* food production and consumption in South West, Nigeria. The thesis addressed five research questions and five specific objectives. To achieve the objectives of the study, extensive library research involving the use of journals, theses, books and online materials was conducted to explore the factors in relation to the study that can be employed. From the previous studies, the Theory of Planned Behaviour has been established to be a framework ever used in Arts and Social Sciences to determine the behaviour of people towards an action or undertaking. Here, this theory is considered appropriate and was used as a framework for the study. Awareness, knowledge and religiosity have also been used as variables to study the behaviour of Muslims in relation to consumption of *ḥalāl* food. Thus, awareness, knowledge, perception and religiosity have always been having a great influence on consumers' behaviours towards food consumption or patronage resulting from the findings of the previous researches. *Ḥalāl* certification, *ḥalāl* logo and *ḥalāl* logistics were included in the study as factors that can influence the consumers' behaviours and factors that can guarantee *ḥalālān tayyiban* status of *ḥalāl* products as proven by the previous research findings in *ḥalāl* food issues. Awareness, knowledge, attitude, subjective norms and perceived behaviour control, religiosity, *ḥalāl* knowledge, certification, *ḥalāl* logo, *ḥalāl* knowledge and *ḥalāl* logistics were independent variables while perception was the dependent variable in the sets of the questionnaires as applicable. Demographic factors were also independent variables across the four sets of the respondents which explore their effects on the level of awareness,

knowledge and perception of the respondents on *ḥalāl* food. Convention Theory was incorporated with the Theory of Planned Behaviour. This is because Convention Theory deals with the quality, safety and integrity of products which are considered as influencing factors that could influence the behavioural intention of a consumer. This is in line with the intrinsic or perceived behavioural control as influencing factor in behavioural intention of a consumer as propounded by the theory of Icek Ajzen-Theory of Planned Behaviour. Actor-Network Theory is used in supervising stages of production and processing of goods till it gets to the last consumer. This is to ensure efficiency and integrity of the product. Thus, the theory was employed in exploring *ḥalāl* food logistics.

This thesis consists of six chapters. Chapter one, which is mainly introductory, poses a number of research questions to explore the correlates of *ḥalāl* food among different sets of stakeholders on food production. It explores the influence of awareness of *ḥalāl* food, *ḥalāl* knowledge, *ḥalāl* certification and logistics, planned behaviour, behavioural intention on the perception of Muslim consumers of *ḥalāl* food. The research questions also capture the perception of food service providers and health workers towards *ḥalāl* slaughter, *ḥalāl* certification, logo and logistics to achieve the stated objectives of the study. Questions were also posed to examine the regulatory and operational standards of the *ḥalāl* product certification bodies in South West, Nigeria. Government influence was also examined though not part of the objectives of the study. These questions were used to test the extent to which the objectives of the study, as stated in this chapter, have been achieved. The chapter identifies the study as a compendium for the academics as it presents a holistic look on *ḥalāl* food phenomenon and as a catalyst for further researches on *ḥalāl* food. The chapter presents the work as an awake for the Muslim consumers towards *ḥalāl* food consumption; and as an exposé of *ḥalāl* food prospects to the food processors and the government. The chapter also gives an overview of the origin of the six states of the geopolitical zone studied.

Chapter two is the literature review aspect of the thesis. It contains the review of textbooks, projects, theses, journal articles and online materials related to *ḥalāl* food concept. It reviews the basic rules of the Islamic law (*ḥukm shari'*) with detailed explanation of the meaning of *Sharī'ah* and *maqāsid al-Sharī'ah* to establish the



benchmark of *ḥalāl* food. Also, the Shariah terms- *al-wajib*, *al-nadb*, *al-kirahah*, *al-ḥarām*, *al-mubāh* as the *'uṣūl* of *Sharī'ah* are discussed. The chapter discusses *ḥalāl* and *ḥarām* concept in the context of food production.

The verses of the Glorious Qur'an and the *aḥadith* of the Holy Prophet (PBUH) related to *ḥalāl* food prescription and requirements and the prohibition of some food were studied and analysed according to the various views, submissions and opinions of the Islāmic jurists. Slaughter was reviewed in line with kosher, traditional and Islāmic ways of slaughtering animals to justify the spiritual and humane status of Islāmic slaughter and the health tendency derivable from it as its advantages over the other ways of animal slaughter. Stunning is opposed by many Islāmic jurists because of the fear that the animal might have died after stunning and before being slaughtered. In addition, there is tendency that the blood of a stunned animal may not gush out completely after slaughter. This is because the animal have been hypnotised and rendered inactive by stunning. Some food scandals were recorded in this chapter. *Ḥalāl* food operation would reduce food scandals if it does not totally extinguish it from food industry through strict supervision of the food producers and manufacturers by *ḥalāl* compliant teams. Some recommended Hazard Analysis Critical Control Points of some food processing were contained in this chapter as written by Riaz and Mian (2004). Some food products such as confectionaries and baked food products, chewing gum, doughnuts and breakfast cereals whose ingredients mostly contain some harmful substances on the consumers were conceptually studied as features in this chapter. Ingredients like stearates and gelatin are usually used in chewing gum and their state of being *ḥalāl* is doubtful because gelatin is derived from pork in most cases.

The chapter further presents some food products in the markets that are identified with *ḥalāl* inscription/logos. Some of these products were produced by home factories. There are some imported products with similar case. Many of these products only carried *ḥalāl* inscriptions written in Arabic and English languages side by side. These inscriptions cannot be regarded as logos as the inscriptions cannot be traced to any local or international *ḥalāl* certification bodies or agencies. Thus, the chapter presents findings from field work on market survey and observation of the food products and

the level of *halāl* conformity. It identifies some *halāl* certification bodies in South West, Nigeria, which include *Halāl* Certification Authority (HCA); *Halāl* Research Council (HRC); *Halāl* Compliance and Food Safety Limited (HaCFoS) and Muslim Ummah for South West, Nigeria (MUSWEN). It was observed that many of the products with *halāl* inscriptions found at the markets did not have a traceable logo or the name of the *halāl* food certifying organisation as in the case of SON and NAFDAC in Nigeria and JAKIM *halāl* logo in Malaysia. Some certified *halāl* food industries in South West, Nigeria were identified such as Sayed Farms Nigeria Limited certified and supervised by MUSWEN, Obasanjo Farm Nigeria Limited, certified by NSCIA and others. Some home products were identified with *halāl* inscriptions/logos such as Parle Food Plc biscuits products, Yale Foods Plc and PZ Cussons Plc among others. The chapter looks at *halāl* food certification as an act of inspecting the process of production and the environment of the company in line with *Sharī'ah* food regulations and certifying it as *Sharī'ah* compliant. It discusses some challenges in *halāl* industry and identifies some countries with Muslim minority such as Singapore, South Africa and Thailand who have received *halāl* food practice with government recognition and involvement.

Chapter three presents the methodology. The study was survey design. It adopted quantitative and qualitative methods. Questionnaires, in-depth interviews and empirical observations were used as instruments. The instruments were validated through face and content validity tests. Reliability test of the questionnaires used was carried out using Cronbach Alpha coefficient test with the data collected from pilot study. The quantitative data were analysed using descriptive statistics, Pearson correlation and ANOVA test while the qualitative data were carried out using content analysis.

Chapter four is the results and discussion on research questions one, two and three. The chapter shows the data analysis, findings, interpretation and discussion of the study. It presents the answers to the three research questions which were used to achieve the three objectives of the study. The chapter also presents answers to six hypotheses of the study. Descriptive statistics was used for detailed information on the demographic profiles of the respondents and to explore the respondents' level of awareness, knowledge and perception of *halāl* food; religiosity, *halāl* certification,

*halāl* knowledge and *halāl* logistics. Pearson correlation multiple regression was used to answer the research questions and correlation statistics was used to answer the null hypotheses. The results from the findings indicate that awareness, knowledge of *halāl* food, attitude, subjective norms, perceived behavioural control, behavioural intention and religiosity, perception of *halāl* certification and logistics and knowledge of *halāl* terms jointly had a significant influence on the perception of Muslim consumers in consumption of *halāl* food.

Also, it was found that awareness of *halāl* food, knowledge of *halāl* food, awareness of *halāl*, knowledge of *halāl* slaughter, certification and perception of *halāl* certification and *halāl* logistics had great influences on primary food workers' perception of *halāl* food. The results from the correlation test reveal that awareness of *halāl* food, knowledge of *halāl* food, perception of *halāl* certification, perception of *halāl* logo and logistics had great impacts on the perception of processed food workers towards *halāl* food.

Chapter five presents results and discussion on research questions four and five. The chapter shows the data analysis, findings, interpretation and discussion of the study. It presents the answers to two research questions which were used to achieve objectives four and five of the study. The chapter also presents answers to seventh and eighth hypotheses of the study. Descriptive statistics was used for detailed information on the demographic profiles of the respondents and to explore the respondents' level of awareness, knowledge and perception of *halāl* food; *halāl* certification, *halāl* knowledge and *halāl* logistics. Pearson correlation multiple regression was used to answer the research question and correlation statistics was used to answer the null hypothesis. The results from the findings indicate that it was found that awareness of *halāl* food, knowledge of *halāl* food and awareness of *halāl* slaughter had great influences on health workers' perception of *halāl* food.

The level of compliance of the standard of operation of the *halāl* certification bodies in South West, Nigeria was still at infancy stage as many of the certification bodies did not have *halāl* trained auditors and majority who have certified-*halāl* trained auditors have not certified any food company as at the time of the interview. Most of the certified food companies did not have trained *halāl* internal auditors and most of them were not being supervised by the certification bodies after the first certification approval. Chapter six contains the summary, conclusion, contributions to knowledge and recommendations of the study.

## 6.2 Conclusion

The findings of the study established that *ḥalāl* food consumption is practised at the individual level despite the fact that many Muslims are aware of *ḥalāl* food as a dictate of Islām by Allāh for the wellbeing of the Muslims in particular and the whole mankind in general. Because of different religious schools of thought in Islām, *ḥalāl* standards vary from one *madhhab* to the other, however, the variances are on minor requisites or conditions where there are no clear or direct prohibitions. The Muslims have a good knowledge and positive perception towards *ḥalāl* food consumption. Planned behaviour and religiosity are established to be influencing factors that make Muslims to patronise *ḥalāl* food. Certification and *ḥalāl* logistics increase the trust and confidence of the consumers in *ḥalāl* food. Thus, certification and logistics serve as influencing factors that can make the Muslims to consume *ḥalāl* food. Government intervention or involvement in *ḥalāl* food practice will increase the level of receptivity of *ḥalāl* food practice with the establishment of *ḥalāl* food agency and provision of unique *ḥalāl* logo. This will also fetch certified *ḥalāl* food companies exportation opportunity of their *ḥalāl* products to outside countries. By the way, this will add to the revenue generated from food sector for the government.

Though, some health workers were aware of *ḥalāl* food phenomenon, they did not have much concern about it because they are not guided nor operated under *Sharī'ah* food regulations. Some of the health workers were not even familiar with *ḥalāl* slaughter, its certification and logistics. However, they perceived *ḥalāl* food certification and logistics necessary to enhance *ḥalāl* food production.

Some of the food processors were aware of *ḥalāl* food with some knowledge and positive perception of it. They were not guided or operated on a strict control of *Sharī'ah* food regulations as they were not supervised by any *ḥalāl* food compliant body. However, they had a good perception to *ḥalāl* certification, logos and *ḥalāl* logistics.

The *ḥalāl* food certification service is at the infancy stage. Some of the certification bodies have not certified any food company or food processor. Even the certification bodies which have been certifying food companies have not yet a significant record of certified food companies. The certification is still based on the request by the food companies who were either encouraged by the company that has been certified or by importing countries who basically will not accept non-ḥalāl food. Basically, Nigeria has been losing in benefiting from the economic prospects in the global *ḥalāl* industry despite her appreciable Muslim populace and her comparative advantage on agricultural produce over other countries that are currently the active *ḥalāl* food players in the global *ḥalāl* market. The food processors are yet to seize *ḥalāl* food advantage among other producers. Muslim consumers are yet to condition the food producers to produce *ḥalāl* food as they have not been religiously and strictly demanding for *ḥalāl* food; a reaction which can force or encourage food producers to get their companies *ḥalāl*-certified.

### **6.3 Recommendations**

Thus, from the results of this study, the following are recommended:

1. Awareness and perception of non-Muslims towards *ḥalāl* food consumption can be studied. This would create awareness among the non-Muslims. It would better their knowledge and right their perception.
2. *Ḥalāl* tourism as a booster of economic growth in Nigeria can be explored. *Ḥalāl* tourism is a new area of economic growth. The study can expose the government, corporate bodies and private individuals to venture into it. This could attract foreign investors and bring about influx of tourists to visit Nigeria.
3. Pharmaceutical products and *ḥalāl* compliance in Nigeria can be probed. All aspects of human life falls between *ḥalāl* and *ḥarām*. Pharmaceutical products are consumables like food products, thus, their ḥalālness is compulsory before it could be consumable for Muslims. In Nigeria context, at present, no research has been carried out to study the *ḥalāl* status of the pharmaceutical products and the operation of the pharmacists in line with *Sharī‘ah* guidelines.
4. Some cosmetic products contain some of non-ḥalāl ingredients such as alcohol. The awareness of *ḥalāl* cosmetic products by the producers or manufacturers and Muslim consumers can be investigated.
5. A conceptual study of *ḥalāl* certification standard of the local and international certification bodies and agencies can be conducted. With a cross-examination of the rules and regulations and the operation of the systems of the *ḥalāl*

certification bodies, it could confirm the standard and the state of operation of the certification bodies.

6. Hotel operators' awareness and perception of *ḥalāl* food services can be investigated. This research does not cover the operation of hotel management in compliance with *Sharī'ah* dietary laws and the awareness and perception of hotel managers in Nigeria. A study on this could bring about a change towards *ḥalāl* directions in hotel industry.
7. A study of Nigeria's prospects in *ḥalāl* food industry can be explored. Most of the agricultural produce in Nigeria such as yam, maize, millet, soya beans, cashew, cocoa, sorghum and most of the livestock except pigs are *ḥalāl* by origin. Thus, an exploration of the *ḥalāl*ness of the food products in Nigeria agricultural sector will reveal the advantage Nigeria has over other countries in *ḥalāl* food industry.
8. Factors militating against *ḥalāl* food consumption among the Muslims in South West, Nigeria is worthy of study. Most studies on *ḥalāl* food concept are carried out on influencing factors on consumption of *ḥalāl* food. Few researches are on hinderances and militating factors in the consumption of *ḥalāl* food. An attempt towards this direction could bring about redirection of researchers from one-way direction and likely to come with new approach in the administration of *ḥalāl* food concept.
9. Receptivity of *ḥalāl* food certification among restaurant operators in South West, Nigeria can be investigated. The result of this study can not be used to generalise the situation of operation of the restaurants and the level of awareness of *ḥalāl* food among the restaurant operators as a few of them participated in the study. So, an in-dept study can still be carried out on this sector to reveal the level of receptiveness of *ḥalāl* food certificate by the restaurant operators.
10. Muslim individuals, communities and organisations should stop compromising their choice of food at the detriment of Islāmic fundamental. They should be decisive in their choice for *ḥalāl* food. Their urge for *ḥalāl* food would create awareness among food producers and encourage them to accept and comply with *ḥalāl* food requirements. This could also stimulate food processors to go for *ḥalāl* food certification and logo.
11. The Muslim clerics in various mosques, Islāmic organisations, societies and *ḥalāl* certification bodies should create active awareness of *ḥalāl* food

consumption, its certification and logos among their followings and across the food and health workers who comprise both Muslims and non-Muslims.

12. All the *ḥalāl* certification auditors should be certified *ḥalāl* trained. The *ḥalāl* food certification bodies should periodically organise awareness programmes for the various sectors of food service providers and embark on periodical follow-up supervision on the *ḥalāl*-certified food companies. The certification bodies should also ensure that Muslim certified-*ḥalāl* trained internal auditors supervise the processes of production in the *ḥalāl* certified food companies in every production. In addition, the certification bodies should liaise with one another to ensure unified standard in compliance with *Sharī'ah* food laws.
13. Private individuals and Islamic organisations can go into establishment of *ḥalāl* abattoirs.

#### **6.4 Contributions to knowledge**

1. Broad approach has not been given to the study of *ḥalāl* food concept by previous researchers. Researchers have written extensively on food, food processing and food technology but not enough of their writings were based on the Islāmic practice necessitating the need to carry out research on the state of *ḥalāl* food production and consumption looking at some factors that can positively influence and promote its consumption and production among the consumers and major stakeholders in food industry. This research work fills this vacuum.

2. This work is a concise compendium of *ḥalāl* food for the Muslim 'ummah and any other person or persons as it elucidates and establishes the implications of *ḥalāl* food spiritually, socially, economically and health-wise to the entire readers,

3. It also exposes the needs why *ḥalāl* food should be consumed by Muslims as a religious fundamental and be prioritised by non-Muslims in food selection on the basis of its health benefits which they are exposed to by the research work. This is because it removes the ignorance of the majority of Muslims on many processed foods which they believed were the most hygienic by exposing them to harmful coded additives in the ingredients of some food products.

4. Another benefit is the identification of authentic *ḥalāl* logos. The research also awakens Muslim bodies and organisations to realise their obligations in addressing and promulgating fundamental issues such as *ḥalāl* food production and marketing which can help them put a stop to nonchalant and les-affaire attitude towards the consumption of *ḥalāl* food.

5. It can lead to the springing up of *ḥalāl* food companies and *ḥalāl* markets in Nigeria as experienced by other countries of the world like United Kingdom, South Africa, Ghana and Malaysia.

6. It exposes food companies to the global benefits of *ḥalāl* food operation. The operation can make them expand their markets to countries where *ḥalāl* foods are patronised.

7. The thesis serves as a source of reference for the government in terms of its initiatives and policies on foods. Giving a better knowledge of *ḥalāl* food concept and exposing it to its economic prospects, the government would not hesitate to approve establishment of *ḥalāl* organisations and agencies in the region and the country as a whole as it is practised in other countries of the world where Muslims form a vast majority.

8. With the results of this research, the *fatwa* on *ḥalāl* food can have a space in the national policy on food. The results of the research can lead to institutionalisation of *ḥalāl* food in Nigeria.



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## APPENDICES

### APPENDIX A

#### ḤALĀL FOOD LOGO AND CERTIFIER CHECKLISTS (HaFoLoC)

**Table 2.2: Checklist of *halāl* logos/inscriptions and *ḥalāl* food certifiers of some dairy products**

Product	Manufacturer's name	Halāl logo/inscription	Ḥalāl food/logo certifier
Nunu milk	PZ Cussons Plc	✓	X
Marvel milk	Premier Foods Ltd	X	X
Dano milk	Dano Milk Nig. Plc	X	X
Loya milk	Loya Milk Premium Plc	X	X
Peak milk	Friesland Campina WAMCO Nig Plc	X	X
Three crown milk	Friesland Campina WAMCO Nig Plc (West Africa Milk Company Nigeria Plc)	X	X
Fan milk yogurt	Fan Milk Plc	X	X
Coast milk	PZ Cussons Plc	✓	X
Peak milk Nigeria	West Africa Milk Company Nigeria Plc	X	X
Popular milk	Givanas Nig. Ltd	X	X
Olympic milk	PZ Cussons Plc	✓	X
Luna milk	Givanas Nig. Ltd	X	X
Hollandia evaporated milk	Chi Ltd	X	X
Complan milk	Oriental Food Industry Ltd, Km 4 Ibadan Lagos Express Rd.	X	X

Source: Market survey by the researcher. Dec 2018.

**Table 2.3: Checklist of *halāl* logos/inscriptions and *ḥalāl* food certifiers of some flour and bagged grains**

Product	Manufacturer	Halāl logo/inscription	Ḥalāl food certifier
Dangote Flour	Dangote Flour Mills plc	✓	X
Honeywell Semolina	Honeywell Flour Mills Plc	✓	X
Golden penny	Flour Mills of Nigeria Plc	X	X

Semovita			
Dangote Semovita	Dangote Flour Mills plc	X	X
Rice		X	X
Sambi Rice	Indian product	✓	X
Lava Rice	Indian product	X	X
Genius Rice	Indian product	X	X
Malaza Rice	Indian product	X	X
Moti Rice	Indian product	X	X
Fortune Rice	Indian product	X	X
African Princess rice	Thailand product	X	X

Source: Market survey by the investigator. December 2018.

**Table 2.4: Checklist of *halāl* logos/inscriptions and *ḥalāl* food certifiers of some cookies and noodles (cereals products)**

Product	Manufacturer	<i>Halāl</i> logo/inscription	<i>Ḥalāl</i> food certifier
Honeywell spaghetti	Honeywell Flour Mills Plc	X	X
Golden penny spaghetti	Flour Mills of Nigeria Plc	X	X
Golden penny twist	Flour Mills of Nigeria Plc	X	X
Oba spaghetti	Oba Makamaclik San ve Tic A.S, Turkey	✓	X
Eva spaghetti	Oba Makamaclik San ve Tic A.S, Turkey	✓	X
Honeywell twist	Honeywell Flour Mills Plc	X	X
Dangote pasta spaghetti	Dangote Flour Mills plc	X	X
Honeywell noodle	Honeywell Flour Mills Plc	✓	X
Dangote noodle	Dangote Flour Mills plc	X	X
Hungryman, noodle	Hungry Man Productions	X	X
Oriental noodle	Oriental Noodle Company	X	X
Superpack noodle	Dufil Prima Foods Ltd	✓	X
Bellefull noodle	Dufil Prima FooddsPlc	X	X
Superpack	De United Foods industries Ltd	✓	X

Source: Market survey by the investigator. December 2018.

**Table 2.5: Checklist of *halāl* logos/inscriptions and *ḥalāl* food certifiers of some breads (cereal products)**

Product	Manufacturer	<i>Halāl</i> logo/inscription	<i>Ḥalāl</i> food/logo certifier
Unilag bread	Unilag Campus Dan Foddio Boulevard, Lagos State.	X	X
FCEABITE bread	Osiele Venture Ltd (OVL) FCE Abeokuta, Ogun State.	X	X
Oyato bread	Oba Adesida Road, Akure, Ekiti State.	X	X
Tomfem bread	Adebayo, Ado Ekiti, Ekiti State.	X	X
Butterfield bread	2 Jagal Close Office Ikorodu, Lagos State.	X	X
Qstrich Bread	1. Olonkoro Rd, Ajegunle Olorunda, Osogbo, Osun State.	X	X
UCH bread	UCH, Ibadan	X	X
Fortunate bread	9. Tijani Adejumo Street, Behind Niger River Basin, Off Ajasin Rd Ilorin, Kwara State	X	X

Source: Market survey by the investigator. December 2018.

**Table 2.6: Checklist of *halāl* logos/inscriptions and *ḥalāl* food certifiers of some snacks**

Product	Manufacturer	<i>Halāl</i> logo/inscription	<i>Ḥalāl</i> food/logo certifier
Rite & Bigi	Rite Foods Ltd, Opebi, Ikeja	✓	X
Witness plus	Living Witness Ltd Ikeja, Lagos	X	X
Baba gala	Health Products & Farms Amuwo Odofin Lagos	X	X
Big gala	M 16, Ikorodu Rd, Ojota, Lagos State.	X	X

Source: Market survey by the investigator. December 2018.

**Table 2.8: Checklist of *halāl* logos/inscriptions and *ḥalāl* food certifiers of some preserved fruits**

Product	Manufacturer	<i>Halāl</i> logo/inscription	<i>Ḥalāl</i> food certifier
Apple	South Africa	X	X
Grapes	Egypt	X	X
Oranges	Cotonou	X	X

Source: Market survey by the investigator. December 2018.

**Table 2.8: Checklist of *halāl* logos/inscriptions and *ḥalāl* food certifiers of some drinks and beverages**

Product	Manufacturer	<i>Ḥalāl</i> logo/inscription	<i>Ḥalāl</i> food certifier
Milo /Nescafé	Nestle Nigeria Plc	✓	X
Bournvita	Cadbury Nigeria Plc	✓	X
La Casera	Classic Beverages Ltd	X	X
Hi Malt		X	X
Lucozade energy	Suntory Beverage and Food Ltd	X	X
Coca Cola	Coca Cola Company Plc	X	X
5 Alive	Coca Cola Company Plc	X	X
Maltina,	Nigeria Beverages Plc	X	X
Nutri- C/Sway	Cway Foods and Beverages Nigeria Ltd	X	X
Bigi cola	Rite Foods Ltd	X	X
Big Cola	Ajeast Nigeria Ltd, Ibadan	X	X
Active		X	X
Lucozade boost	Suntory Beverage and Food Ltd	X	X
Boom	Acreage Food Ltd	X	X
Ice tea, Exotic, Happy Hour, Capri-sun	Chi Ltd	X	X
Cway	Cway Foods and beverages Nigeria Company Ltd	X	X
Origin zero	Guinness Nigeria Ltd	X	X

Source: Market survey by the investigator. December 2018.

**Table 2.10: Checklist of *halāl* logos/inscriptions and *ḥalāl* food certifiers of some bottle and sachet waters**

Product	Manufacturer	<i>Ḥalāl</i> logo/inscription	<i>Ḥalāl</i> food certifier
Eva water	Coca Cola Plc	X	X
Aquafina	Seven Up plc	X	X

water			
OORBDA Water	Ogun-Osun River Basin Development Authority, Abeokuta	X	X
Ghazal Water	Gazal Water Plc, Abeokuta, Ogun state	X	X
Damson Table water	Damson water Idi odo Ibadan	X	X
Aqua virgin water	Eleyele Ibadan	X	X
Cee waters	Gbodofon Gbogan Rd Osogbo	X	X
Dantos water	Ilesa Road Osogbo	X	X
Stepbuk Table water	Oda Road Akure	X	X
Dorcas Table water	Fajuyi park Akure	X	X
Flok water	Akure	X	X
3M water	Odongunyan, Ikorodu, Lagos	X	X
Hasfat water	Ikeja Area Office, Ikeja Lagos	X	X

Source: Market survey by the investigator. December 2018.

**Table 2.11: Checklist of *ḥalāl* logos/inscriptions and *ḥalāl* food certifiers of some condiments**

Product	Manufacturer	<i>Ḥalāl</i> logo/inscription	<i>Ḥalāl</i> food/logo certifier
Knorr cube	Unilever Plc	X	X
Royco cube	Unilever Plc	X	X
Vitali crayfish paste	Vital Products Plc	X	X
Tasty Tom tomato paste	Pan African Agric Ltd	X	X
Gino Tomato	Conservaria Africana Ltd	X	X
Sonia Tomato paste	Sonia Food Industries	X	X
De Rica tomato paste	Pan Africa Agric Ltd	X	X
Heinz tomato mix	Vital Products Plc	X	X

Source: Market survey by the investigator. December 2018.

**Table 2.12: Checklist of *ḥalāl* logos/inscriptions and *ḥalāl* food certifiers of some powder peppers**

Product	Manufacturer	<i>Ḥalāl</i> logo/inscription	<i>Ḥalāl</i> food/logo certifier
SpiCity	Integrated Promotion Ltd	✓	X

Gino curry powder	GB Foods Group Hong Kong	X	X
Tiger curry gold	Tiger Food Ltd	X	X
Euroma curry powder	Tiger Food Ltd	X	X
Nora spice	Nora foods S.A. (imported)	X	X
Global Purepep		X	X

Source: Market survey by the investigator. December 2018.

**Table 2.13: Checklist of *halāl* logos/inscriptions and *ḥalāl* food certifiers of some toothpaste**

Product	Manufacturer	<i>Ḥalāl</i> logo/inscription	<i>Ḥalāl</i> food certifier
Close up	Unilever Plc	X	X
Oral B	Fabrique par Ltd	X	X
Macleans	Glaxo Smith Kline Consumer Nigeria Plc	X	X
Olive	Classic Soap Industries (Nig) Ltd	X	X
Pepsodent	Unilever Plc	X	X
Dabur	African Consumer Care Ltd	X	X
Colgate	Colgate Palm Olive Plc	X	X
Milkteeth		X	X

Source: Market survey by the investigator. December 2018.

## APPENDIX B

### Exploratory Factor Analysis (EFA) for Muslim consumers

Table 3.1 Factor loading of items on Muslims' awareness on *ḥalāl* food

Item	Factor loading
1. I am familiar with the term <i>ḥalāl</i> .	0.695
2. I am aware of <i>ḥalāl</i> food.	0.726
3. I am familiar with the term <i>ḥalālan tayyiban</i> .	0.657
4. I (do) hear of <i>ḥalāl</i> slaughter (killing).	0.612
5. I know some <i>ḥalāl</i> certification organisations in South West, Nigeria.	0.558
6. I have come across <i>ḥalāl</i> logos in some food products.	0.591
7. I know that pork and its products are <i>ḥarām</i> .	0.645
8.s I know that alcohol and its products are <i>ḥarām</i> .	0.619
9. Eating <i>ḥarām</i> food is punishable by <i>Sharī'ah</i> .	0.581
10. Eating <i>ḥalāl</i> food is rewarded by <i>Sharī'ah</i> .	0.607
11. I have heard of <i>ḥalāl</i> food promotions.	0.547
12. I have attended <i>ḥalāl</i> food festival(s).	0.649

Table 3.2 Factor loading of items on Muslims' perception of *ḥalāl* food

Item	Factor loading
Eating <i>ḥalāl</i> food purifies souls	0.758
Eating <i>ḥalāl</i> food fulfills one's religious obligation.	0.782
Eating <i>ḥalāl</i> food is a requisite to acceptance of supplications by Allah.	0.784
Choosing to eat <i>ḥalāl</i> food is an act of obedience to Allah.	0.771
<i>Ḥalāl</i> food prevents food poisoning.	0.699
<i>Ḥalāl</i> food improves and sustains personal health.	0.818
<i>Ḥalāl</i> food guarantees food safety.	0.808
<i>Ḥalāl</i> food guarantees food quality.	0.783
<i>Ḥalāl</i> food guarantees natural food taste.	0.719

### Items measuring knowledge of Muslims on *ḥalāl* food

Table 3.3 Factor loading of items on knowledge of Muslims on *ḥalāl* food

Items	
<i>Ḥalāl</i> food is only food prepared under strict compliance with Islamic dietary law.	0.616
<i>Ḥalāl</i> is anything that is permissible by <i>Sharī'ah</i> .	0.689
<i>Ḥarām</i> is anything that is prohibited by <i>Sharī'ah</i>	0.657
<i>Ḥalāl</i> animal must be slaughtered invoking Allah's name before the meat can be edible for Muslim consumption.	0.657
Flowing blood from slaughtered animal is prohibited for Muslim consumption.	0.632
<i>Maytatah</i> (carrion) is any animal that dies of itself	0.716
<i>Maytatah</i> is prohibited for Muslim consumption.	0.701
Pig and pig products are <i>ḥarām</i> in Islam.	0.711
All carnivores and their products are <i>ḥarām</i>	0.640
All water animals are <i>ḥalāl</i> according to <i>Sharī'ah</i> .	0.619
<i>Ḥalāl</i> food becomes <i>ḥarām</i> if contaminated with haram food	0.688
Haram becomes <i>ḥalāl</i> only in a critical health condition to save life or when under duress of attack	0.600

### Construct validity for items measuring attitude

Table 3.4 Factor loading of items on attitude

Item	Factor loading
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I choose to buy <i>ḥalāl</i> food always	0.798
I consume <i>ḥalāl</i> food as spiritual/ <i>ibādah</i> .	0.726
I feel generally satisfied with <i>ḥalāl</i> food product.	0.781
I determine not to eat food whose source is doubted to be <i>ḥalāl</i> .	0.733
My family always eats <i>ḥalāl</i> food	0.800
I love to recommend <i>ḥalāl</i> food to people who are close to me.	0.798
I really decide not to eat food whose source is not <i>ḥalāl</i> .	0.736
I really decide not to consume food that is prepared with non <i>ḥalāl</i> ingredients.	0.739
<i>Ḥalāl</i> food product is more appealing to me.	0.795
I determine not to consume food that is prepared with non <i>ḥalāl</i> ingredients.	0.738

**(E) Construct validity for items measuring subjective norms**

Table 3.5 Factor loading of items on subjective norms

Item	Factor loading
My family can influence me to consume <i>ḥalāl</i> food.	0.829
My mosque can influence me to consume <i>ḥalāl</i> food.	0.876
My organisation can influence me to consume <i>ḥalāl</i> food.	0.898
My friends can influence me to consume <i>ḥalāl</i> food.	0.894
Our Imam/missionary can influence me to consume <i>ḥalāl</i> food.	0.849
My co-workers can influence me to consume <i>ḥalāl</i> food.	0.846

### Construct validity for items measuring perceived behavioural control

Table 3.6 Factor loading of items on correlation of perceived behavioural control

Item	Factor loading
I will consume <i>ḥalāl</i> food if the price is low.	0.725
I will consume <i>ḥalāl</i> food if the price is high.	0.685
I will buy <i>ḥalāl</i> food if the price is affordable.	0.808
Income can influence my consumption of <i>ḥalāl</i> food.	0.645
Avalability of <i>ḥalāl</i> food product will influence me to consume <i>ḥalāl</i> food.	0.835
Easy accessibility and availability of <i>ḥalāl</i> food products will influence me to consume <i>ḥalāl</i> food.	0.814
I prefer <i>ḥalāl</i> food even if it is scarce.	0.696

### (G) Construct validity for items measuring behavioural intention

Table 3.7 Factor loading of items on behavioural intention

Items	Factor loading
I intend to buy <i>ḥalāl</i> food as a religious obligation	0.808
I choose to eat <i>ḥalāl</i> food because it is recommended by Allah	0.838
I choose to eat <i>ḥalāl</i> food because I consider it safer	0.865
I choose to eat <i>ḥalāl</i> food because it is considered healthier	0.881
I choose to eat <i>ḥalāl</i> food because it is considered hygienic	0.869
I choose to eat <i>ḥalāl</i> food because it has shelf life quality	0.829
I choose to eat <i>ḥalāl</i> food because it maintains natural taste	0.796

### (H) Construct validity for items measuring religiosity

Table 3.8 Factor loading of items on religiosity construct

Items	Factor loading
Allah is One	0.852
I pray to only Allah	0.867
Prophet Muhammad (PBUH) is the last prophet of Allah	0.862
Prophet Muhammad is my intercessor on the Day of Resurrection	0.835
The Day of judgment is real	0.897
I always fear the Day of Accountability	0.864
I believe in Destiny	0.850

I take whatever happens to me as my destiny ( <i>al-qadar</i> )	0.782
Qur'ān is the last Book revealed by Allah	0.811
I read the Glorious Qur'ān always	0.615
I believe man is created mainly to worship Allah	0.813
I give out charity more in the months of <i>Ramadān</i>	0.627
I attend <i>da'wah</i> programmes always	0.712
I try to stick to <i>sharī'ah</i> in all my undertakings	0.595

**(I) Construct validity for items measuring certification**

Table 3.10 Factor loading of items on certification

Items	Factor loading
<i>Halāl</i> certification/logo signifies that the food is prepared strictly in compliance to <i>Sharī'ah</i>	0.790
Genuine <i>halāl</i> food logo reduces food fraud	0.797
<i>Halāl</i> food certificate guarantees food safety	0.861
<i>Halāl</i> food certificate guarantees healthy food	0.883
<i>Halāl</i> food certificate guarantees food quality	0.851
Establishment of government <i>halāl</i> certification agencies would influence people to consume <i>halāl</i> food	0.790
Inclusion/provision of <i>halāl</i> food Act in the rules and regulations of NAFDAC will stimulate the consumption of <i>halāl</i> food.	0.804

**(J) Construct validity for items measuring logistics**

Table 3.11 Factor loading of items on logistics

Item	Factor loading
Separation of <i>halāl</i> food from non <i>halāl</i> food during conveyance would increase consumers' trust in <i>halāl</i> food products.	0.796
Separation of <i>halāl</i> food from non <i>halāl</i> food would preserve <i>halāl</i> food from cross-contamination.	0.806
Segregation of <i>halāl</i> food from non <i>halāl</i> food would remove doubt of <i>halāl</i> food originality.	0.775
I will not buy <i>halāl</i> food products produced by any company that processes non- <i>halāl</i> food in the same premise.	0.632

I will buy <i>ḥalāl</i> food products that are packaged with non <i>ḥalāl</i> foods whose materials do not leak.	0.382
I will buy <i>ḥalāl</i> foods that are labeled with a widely accepted and approved logo.	0.775
Designing a unique government <i>ḥalāl</i> logo would influence <i>ḥalāl</i> consumption	0.792
Provision/approval of <i>ḥalāl</i> food kiosks for <i>ḥalāl</i> food products by the government will influence people to consume <i>ḥalāl</i> food.	0.796

### Exploratory Factor Analysis (EFA) for health workers

#### A. Table 3.12 Construct validity for items measuring health workers' awareness on *ḥalāl* food

Item	Factor loading
I am familiar with the term <i>ḥalāl</i> .	0.813
I am aware of <i>ḥalāl</i> food.	0.785
I am familiar with the term <i>ḥalālān tayyiban</i> .	0.654
I (do) hear of <i>ḥalāl</i> slaughter (killing).	0.662
I know some <i>ḥalāl</i> certification organisations in South West Nigeria.	0.472
I have come across <i>ḥalāl</i> logos in some food products.	0.617
I know that pork and its products are <i>ḥarām</i> .	0.667
I know that alcohol and its products are <i>ḥarām</i> .	0.676

#### B. Construct validity for items measuring health workers' knowledge of *ḥalāl* food

**Table 3.13**

Item	Factor loading
<i>Ḥalāl</i> food is food recommended for Muslim consumption	0.728
<i>Ḥalāl</i> is anything that is permissible by <i>Sharī'ah</i> .	0.805
<i>Ḥalāl</i> food is food prepared under strict adherence to <i>Sharī'ah</i> dietary law.	0.833
Animal that is not slaughtered according to Islamic rites is not edible for Muslim consumption	0.764
NAFDAC regulations for animal slaughter cover Islamic dietary law.	0.294
<i>Ḥalāl</i> animal must be slaughtered invoking Allah's name before the meat can be edible for Muslim consumption	0.710

**Table 3.14 Construct validity for items measuring health workers' perception of *ḥalāl* food**

Item	Factor loading
<i>Ḥalāl</i> food is good for both Muslims and non-Muslims	0.686
Animal slaughtered following NAFDAC regulations is edible for Muslim consumption.	0.532
<i>Ḥalāl</i> food improves and sustains personal health.	0.886
<i>Ḥalāl</i> food guarantees food safety.	0.867

<i>Ḥalāl</i> food prevents food poisoning.	0.893
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**Table 3.15 Construct validity for items measuring health workers' awareness of *ḥalāl* slaughter**

Item	Factor loading
I am aware of <i>ḥalāl</i> way of slaughtering.	0.803
I have knowledge of <i>ḥalāl</i> slaughter.	0.821
I observe <i>ḥalāl</i> way of slaughtering at slabs during supervision.	0.731
Muslim slaughterers usually slaughter at slabs to make the meat <i>ḥalāl</i> for Muslims' consumption.	0.896
Animals are allowed to die off completely after slaughter before skinning.	0.599
Separate utensils are used for <i>ḥalāl</i> meat carcass.	0.586

**Table 3.16 Construct validity for items measuring health workers' knowledge of *ḥalāl* terms**

I have knowledge of the following Arabic terms in *ḥalāl* food

Item	Factor loading
<i>Ḥalāl</i>	0.723
<i>Ḥarām</i>	0.765
<i>Sunnah</i>	0.576
<i>Mustahabb</i>	0.763
<i>Makrūh</i>	0.839
<i>Shubhaat</i>	0.762
<i>Tayyib</i>	0.762
<i>Ḥalalan Tayyiban</i>	0.824
<i>Al-khabīthah/al-khabā'ith</i>	0.734
<i>Dhibh</i>	0.809
<i>Dhabīhah</i>	0.735
<i>Maytah</i>	0.766
<i>Al-damm</i>	0.799
<i>Khinzīr</i>	0.798
<i>Al-khamr</i>	0.809
<i>Bahīmah al-an'ām</i>	0.742

Thank you for sparing your precious time.

**Exploratory Factor Analysis (EFA) for primary food workers**

**Table 3.17 Construct validity for items measuring awareness of primary food workers of *halāl* food**

Item	Factor loading
I am aware of <i>halāl</i> food.	0.616
I have <i>halāl</i> food knowledge.	0.771
<i>Halāl</i> food is common in my area.	0.610
I sell <i>halāl</i> food	0.786
I am aware of <i>halāl</i> food ingredients.	0.700
I buy ingredients from <i>halāl</i> sources.	0.709
I am aware of <i>halāl</i> slaughter.	0.681
I am aware of <i>halāl</i> beef	0.728
I buy meat from <i>halāl</i> source	0.685
I am aware of <i>halāl</i> food festivals.	0.588

**Table 3.18 Construct validity for items measuring knowledge of primary food workers of *halāl* food**

Item	Factor loading
<i>Halāl</i> food is the only lawful food for Muslims.	0.559
Alcohol and its products are unlawful for Muslim consumption	0.708
Animal that is not slaughtered and its products are unlawful for Muslim consumption.	0.616
Animal that Allah's name is not invoked when slaughtered and its products are not lawful for Muslim consumption	0.744
<i>Halāl</i> food should be prepared using separate utensils	0.656
<i>Halāl</i> food should be separately stored from non <i>halāl</i> food	0.805
Muslim slaughterer must slaughter animal for Muslim consumption	0.663
Ingredients from non <i>halāl</i> source make the food products to become unlawful for Muslim consumption	0.599

**Table 3.19 Construct validity for items measuring perception of primary food workers of *halāl* food**

Item	Factor loading
<i>Halāl</i> food is spiritual for Muslims.	0.632
<i>Halāl</i> food is compulsory for Muslims.	0.621
There is health benefit from <i>halāl</i> food for consumers.	0.789
<i>Halāl</i> food benefits both Muslims and non Muslims.	0.788
<i>Halāl</i> food is hygienic.	0.825
<i>Halāl</i> food is tastier.	0.848
<i>Halāl</i> food is safe	0.776
<i>Halāl</i> food enhances quality of life of the consumers.	0.790

**Table 3.20 Construct validity for items measuring understanding of primary food workers on *ḥalāl* slaughter**

Item	Factor loading
A Muslim must slaughter the cattle	0.657
<i>Bismillah wa Allah Akbar</i> is compulsory when animals are slaughtered	0.696
Animals can be slaughtered in the presence of the other animals on the death roll	0.720
The animal must be slaughtered with a single swift slit.	0.855
Blood must be allowed to gush out completely from the body of the slaughtered animal before post slaughter processing commences.	0.666
Animals are allowed to rest after long distance of conveyance before they are slaughtered	0.682
The animal must be allowed to die off completely before skinning.	0.788
Animals must not be dragged or beaten to the slab.	0.665
Animals must be fed with <i>ḥalāl</i> feeds and substances.	0.660
Beef, chicken and pork can be cooked in the same container.	0.769
Beef, chicken and pork can be stored in the same refrigerator.	0.761
Cattle, chicken and pigs can be slaughtered with the same knife or equipment.	0.732

**Table 3.21 Construct validity for items measuring awareness of primary food workers on *ḥalāl* food certification**

Item	Factor loading
I am aware of <i>ḥalāl</i> food certification.	0.893
I am aware of <i>ḥalāl</i> food certification agencies.	0.930
I am aware of <i>ḥalāl</i> food vendors with <i>ḥalāl</i> certificate.	0.900
I am aware of application procedure on <i>ḥalāl</i> food certification.	0.924
<i>Ḥalāl</i> food agencies have visited my canteen for <i>ḥalāl</i> food certification.	0.889

**Table 3.22 Construct validity for items measuring primary food workers' perception on *ḥalāl* food certification**

*Ḥalāl* certification indicates that...

Item	Factor loading
<i>Ḥalāl</i> certification/logo signifies that the food is prepared strictly in compliance with <i>Shari'ah</i> .	0.584
Genuine <i>ḥalāl</i> food logo reduces food fraud.	0.933
<i>Ḥalāl</i> food certificate guarantees food safety.	0.748
<i>Ḥalāl</i> food certificate guarantees healthy food.	0.732
<i>Ḥalāl</i> food certificate guarantees food quality.	0.788

Establishment of government <i>ḥalāl</i> certification agency would influence people to consume <i>ḥalāl</i> food.	0.751
Provides a comparative advantage over non <i>ḥalāl</i> certified food service firms	0.766
<i>Ḥalāl</i> certification/logo signifies that the food is prepared strictly in compliance to <i>Shari'ah</i> .	0.700

**Table 3.23 Construct validity for items measuring primary food workers' perception of *ḥalāl* food logistics and procurement**

Item	Factor loading
Packaging and labeling of <i>ḥalāl</i> food should be in a contamination-free environment.	0.681
Training of personnel towards <i>ḥalāl</i> food processing enhances <i>ḥalāl</i> food quality and trust.	0.726
<i>Ḥalāl</i> storage facilities will preserve the status of <i>ḥalāl</i> food products.	0.625
Muslim workers should be in every critical control point in <i>ḥalāl</i> food production.	0.798
Separate equipment should be used for <i>ḥalāl</i> food processing where non- <i>ḥalāl</i> food products are manufactured.	0.763
Effective transportation system enhances <i>ḥalāl</i> food status.	0.790

**Table 3.24 Construct validity for items measuring knowledge of *ḥalāl* terms among primary food workers**

I have knowledge of the following Arabic terms on *ḥalāl* food

Item	
<i>Ḥalāl</i>	0.796
<i>Ḥarām</i>	0.784
<i>Sunnah</i>	0.756
<i>Mustahābb</i>	0.750
<i>Makrūh</i>	0.750
<i>Shubhāt</i>	0.815
<i>Tayyib</i>	0.788
<i>Ḥalālan Tayyiban</i>	0.820
<i>Al-khabīthat/al-khabā'ith</i>	0.830
<i>Dhibḥ</i>	0.787
<i>Dhabīhah</i>	0.791
<i>Maytah</i>	0.780
<i>Al-damm</i>	0.795
<i>Khinzīr</i>	0.713
<i>Al-khamr</i>	0.783
<i>Bahīmah al-an'ām</i>	0.763

Thank you so much for sparing your precious time.



**Exploratory analysis for processed food workers (EFA)**

**Table 3.25 Construct validity for items measuring awareness of food processed food workers of *halāl* food**

Item	Factor loading
I am aware of <i>halāl</i> food as recommended food for Muslim consumption.	0.733
This firm produces <i>halāl</i> food in compliance with shariah.	0.589
This firm ensures that the environment meets up with <i>halāl</i> food processing guidelines.	0.513
This firm observes HACCPs (Hazard Critical Control Points) in the food processing.	0.645
The firm uses separate equipment for <i>halāl</i> food where the firm produces non- <i>halāl</i> food.	0.680
I am aware of non- <i>halāl</i> food.	0.735
The firm is certified by standard <i>halāl</i> certification body.	0.801
I am aware of <i>halāl</i> promotions	0.737
I am aware of <i>halāl</i> food festivals	0.746
I am aware of <i>halāl</i> food market	0.713
I am aware of economic advantages of <i>halāl</i> food production	0.524

**Table 3.26 Construct validity for items measuring knowledge of food firm employees (processed food workers) of *halāl* food**

Item	Factor loading
<i>Halāl</i> food is the only lawful food for Muslims.	0.737
Alcohol and its products are unlawful for Muslim consumption	0.714
Animal that is not slaughtered and its products are unlawful for Muslim consumption.	0.827
Animal that Allah's name is not invoked when slaughtered and its products are not lawful for Muslim consumption	0.609
<i>Halāl</i> food should be prepared using separate utensils	0.718
<i>Halāl</i> food should be separately stored from non <i>halāl</i> food	0.733
Muslim slaughterer must slaughter animal for Muslim consumption	0.573
Ingredients from non <i>halāl</i> source make the food products to become unlawful for Muslim consumption	0.733
<i>Halāl</i> food is beneficial to only Muslims	0.364
Any worker who has direct contact with materials, ingredients or equipments used in the preparation of <i>halāl</i> food must be free from communicable diseases.	0.760
The employee must ensure that the suppliers of ingredients have knowledge of <i>halāl</i> food requisites.	0.637

**Table 3.27 Construct validity for items measuring perception of food firm employees (processed food workers) of *halāl* food**

Item	Factor loading
<i>Halāl</i> food is spiritual for Muslims.	0.513
<i>Halāl</i> food is compulsory for Muslims.	0.691
There is health benefit in consuming <i>halāl</i> food.	0.553
<i>Halāl</i> food benefits both Muslims and non Muslims.	0.775
<i>Halāl</i> food is hygienic.	0.545
<i>Halāl</i> food is tastier.	0.599
<i>Halāl</i> food is safe	<b>0.570</b>
<i>Halāl</i> food is clean	<b>0.515</b>
Using detection and screening devices guarantee <i>halāl</i> food status.	0.689

**Table 3.28 Construct validity for items measuring processed food workers' perception of *halāl* food certification**

I perceive that *halāl* certification will...

Item	Factor loading
Reduce food fraud	0.620
Make the firm produce <i>halāl</i> food in compliance with Shari'ah.	0.704
Make the firm to ensure that it provides environment that meets up with <i>halāl</i> food processing guidelines.	0.413

Encourage the firm observe HACCPs in the food processing.	0.712
Make the firm to use separate equipment for <i>halāl</i> food where the firm produces non- <i>halāl</i> food.	0.733
Guarantee that the <i>halāl</i> logo of the firm is authentic	0.672
Promote the firm's sales	0.723
<i>Halāl</i> certification can hike the prices of the products as well.	0.539
<i>Halāl</i> certification can encourage the firm to become an exporter of <i>halāl</i> food	0.707
Enhances quality of life of the consumers.	0.798
Guarantees traceability of <i>halāl</i> food certificate.	0.741

**Table 3.29 Construct validity for items measuring processed food workers' perception of *halāl* food logo**

Item	Factor loading
<i>Halāl</i> logo provides assurance of <i>halāl</i> food compliant products.	0.723
Government certified <i>halāl</i> logo will reduce doubt on <i>halāl</i> logos in the market.	0.806
<i>Halāl</i> logo promotes awareness of <i>halāl</i> food consumption.	0.643
<i>Halāl</i> logo guarantees that the food is authentic <i>halāl</i> .	0.434
A unique and single logo for Nigeria guarantees the originality of <i>halāl</i> logo in the market.	0.753
Attaching punishment to fraud in <i>halāl</i> logo will guarantee customers' confidence on <i>halāl</i> logos in the market.	0.752
<i>Halāl</i> logo should contain inscription that can be easily identified by the consumers.	0.668
<i>Halāl</i> logo clarifies doubt of food origin	0.773
<i>Halāl</i> food certificate is a trademark on its own	0.688
<i>Halāl</i> logo ensures easy recognition of food products	0.736
Uniformity of <i>halāl</i> logo strengthens the reliability of <i>halāl</i> food status	0.736

**Table 3.30 Construct validity for items measuring processed food workers perception on *halāl* food logistics and procurement**

Item	Factor loading
Packaging and labeling of <i>halāl</i> food should be in a contamination free environment.	0.767
Training of personnel towards <i>halāl</i> food processing enhances <i>halāl</i> food quality.	0.584
Dedicated warehouse preserves the status of <i>halāl</i> food products.	0.575
<i>Halāl</i> trained Muslim workers should be in every critical control point in <i>halāl</i> food production.	0.803
Separate equipment should be used for <i>halāl</i> food processing where non- <i>halāl</i> food products are manufactured.	0.734
Detection and screening devices should be used by firms to ensure <i>halāl</i> status of the raw materials.	0.814
All information on the ingredients used for the <i>halāl</i> food must be	0.756

clearly provided on the packages.	
There should be mutual understanding between <i>ḥalāl</i> food suppliers and the manufacturers.	0.748
Effective transportation system enhances <i>ḥalāl</i> food status.	0.560

**Table 3.31 Construct validity for items measuring knowledge of processed food workers of *ḥalāl* terms**

I have knowledge of the following Arabic terms in *Ḥalāl* food

Item	0.752
<i>Ḥalāl</i>	0.764
<i>Ḥarām</i>	0.812
<i>Sunnah</i>	0.772
<i>Mustaḥabb</i>	0.652
<i>Makruh</i>	0.576
<i>Shubhaat</i>	0.800
<i>Tayyib</i>	0.772
<i>Ḥalalan Tayyiban</i>	0.780
<i>Al-khabithat/al-khabā'ith</i>	0.806
<i>Dhibḥ</i>	0.795
<i>Dhabiihah</i>	0.769
<i>Maytah</i>	0.783
<i>Al-damm</i>	0.810
<i>Khinzir</i>	0.809
<i>Al-khamr</i>	0.816
<i>Bahimah al-an'am</i>	0.805

## APPENDIX C

UNIVERSITY OF IBADAN  
DEPARTMENT OF ARABIC AND ISLĀMIC STUDIES  
PhD Thesis

### *ḤALĀL* FOOD ADMINISTRATION IN SOUTH WEST NIGERIA

#### *ḤALĀL* Food Administration Questionnaire (HFAQ) for Muslim consumers

#### Introduction

This questionnaire is conducted to discover the possible way(s) to administer *ḥalāl* food in South West Nigeria effectively for Muslim consumption and non-Muslims to benefit from the health advantages. Your sincerity and objectivity will help to get true and clean outcomes/findings. This questionnaire is mainly academic research. Thus, you are assured of keeping your responses confidentially and safeguard your personality.

#### Section A: Demographic profiles/ Respondents' bio-data

Gender	Tick
Male	
Female	

Ethnicity	Tick
Yoruba	
Hausa	
Igbo	
Others	

Age	Tick
18-25	
26-30	
31-35	
36-40	
41-45	
46-50	
51-55	
56-60	
61 above	

<b>Occupation</b>	<b>Tick</b>
Government employee	
Private sector employee	
Self employed	
Student	
Total	

<b>Level of Education</b>	<b>Tick</b>
Primary	
Secondary	
OND/NCE	
HND/1 <sup>ST</sup> DEGREE	
M.A./MSc.	
PhD	
Others	

<b>State/place of residence</b>	<b>Tick</b>
Ekiti	
Lagos	
Ondo	
Ogun	
Osun	
Oyo	

<b>Source of <i>ḥalāl</i> knowledge</b>	<b>Tick</b>
Social media such as Radio and Television	
Mosque	
Islāmic programmes: <i>ta'lim/tadhkirah/ weekly Sunday Islāmic program (asalatu)</i> etc	
Family	
Friend	
Teacher	

SECTION B

**Instruction:** Five options are provided against each item as follows: Strongly agree, Agree, Neutral, Strongly disagree and Disagree. Please indicate your response by ticking (√) the right option.

A) Muslims' awareness on *ḥalāl* food

Item	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I am familiar with the term <i>ḥalāl</i> .	1	2	3	4	5
I am aware of <i>ḥalāl</i> food.					
I am familiar with the term <i>ḥalālantayyiban</i> .					
I (do) hear of <i>ḥalāl</i> slaughter (killing).					
I know some <i>ḥalāl</i> certification organisations in South West Nigeria.					
I have come across <i>ḥalāl</i> logos in some food products.					
I know that pork and its products are <i>ḥarām</i> .					
I know that alcohol and its products are <i>ḥarām</i> .					
Eating haram food is punishable by Shari'ah					
Eating <i>ḥalāl</i> food is rewarded by Shari'ah					
I have heard of <i>ḥalāl</i> food promotions					
I have attended <i>ḥalāl</i> food festival(s)					

B) Muslim consumers' perception of *ḥalāl* food

Item	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Eating <i>ḥalāl</i> food purifies souls	1	2	3	4	5
Eating <i>ḥalāl</i> food fulfills one's religious obligation.					
Eating <i>ḥalāl</i> food is a requisite to acceptance of supplications by Allāh.					
Choosing to eat <i>ḥalāl</i> food is an act of obedience to Allāh.					

<i>Ḥalāl</i> food prevents food poisoning.					
<i>Ḥalāl</i> food improves and sustains personal health.					
<i>Ḥalāl</i> food guarantees food safety.					
<i>Ḥalāl</i> food guarantees food quality.					
<i>Ḥalāl</i> food guarantees natural food taste.					

(C) Knowledge of Muslim consumers on *ḥalāl* food

Item	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<i>Ḥalāl</i> food is only food prepared under strict compliance with Islāmic dietary law.					
<i>Ḥalāl</i> is anything that is permissible by <i>Sharī'ah</i> .					
<i>Ḥarām</i> is anything that is prohibited by <i>Sharī'ah</i>					
<i>Ḥalāl</i> animal must be slaughtered invoking Allāh's name before the meat can be edible for Muslim consumption.					
Flowing blood from slaughtered animal is prohibited for Muslim consumption.					
<i>Maytah</i> (carrion) is any animal that dies of itself.					
<i>Maytah</i> is prohibited for Muslim consumption.					
Pig and pig products are <i>ḥarām</i> in Islām.					
All carnivores and their products are <i>ḥarām</i> .					
All water animals are <i>ḥalāl</i> according to Shari'ah.					
<i>Ḥalāl</i> food becomes <i>ḥarām</i> if contaminated with haram food.					
Haram becomes <i>ḥalāl</i> only in a critical health condition to save life or when under duress of attack.					

(D) Attitude of Muslims on *ḥalāl* food consumption

Item	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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I choose to buy <i>ḥalāl</i> food always	5	4	3	2	1
I consume <i>ḥalāl</i> food as spiritual/' <i>ibādah</i> .					
I feel generally satisfied with <i>ḥalāl</i> food product.					
I determine not to eat food whose source is doubted to be <i>ḥalāl</i> .					
My family always eats <i>ḥalāl</i> food					
I love to recommend <i>ḥalāl</i> food to people who are close to me.					
I really decide not to eat food whose source is not <i>ḥalāl</i> .					
I really decide not to consume food that is prepared with non <i>ḥalāl</i> ingredients.					
<i>Ḥalāl</i> food product is more appealing to me.					
I determine not to consume food that is prepared with non <i>ḥalāl</i> ingredients.					

(E) Subjective Norms/Social factor- Extrinsic factor

Item	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
My family can influence me to consume <i>ḥalāl</i> food.					
My mosque can influence me to consume <i>ḥalāl</i> food.					
My organisation can influence me to consume <i>ḥalāl</i> food.					
My friends can influence me to consume <i>ḥalāl</i> food.					
Our Imam/missionary can influence me to consume <i>ḥalāl</i> food.					
My co-workers can influence me to consume <i>ḥalāl</i> food.					

(F) Perceived Behaviour Control/intrinsic factor

Item-statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I will consume <i>ḥalāl</i> food if the price is low					
I will consume <i>ḥalāl</i> food if the price is high.					
I will buy <i>ḥalāl</i> food if it is affordable.					

Income can influence my consumption of <i>ḥalāl</i> food.					
Availability of <i>ḥalāl</i> food products will influence me to consume <i>ḥalāl</i> food.					
Easy accessibility of <i>ḥalāl</i> food products will influence me to consume <i>ḥalāl</i> food.					
I prefer <i>ḥalāl</i> food even if it is scarce.					

(G) Behavioural Intention

Items	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I intend to buy <i>ḥalāl</i> food as a religious obligation					
I choose to eat <i>ḥalāl</i> food because it is recommended by Allāh					
I choose to eat <i>ḥalāl</i> food because I consider it safer					
I choose to eat <i>ḥalāl</i> food because it is considered healthier					
I choose to eat <i>ḥalāl</i> food because it is considered hygienic					
I choose to eat <i>ḥalāl</i> food because it has shelf life quality					
I choose to eat <i>ḥalāl</i> food because it maintains natural taste					

(H) Religiosity

Items	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Allāh is One					
I pray to only Allāh.					
Muhammad (SAW) is the last prophet of Allāh.					
Prophet Muhammad is my intercessor on the Day of Resurrection.					
The Day of Judgement is real.					
I always fear the Day of Accountability.					
I believe in destiny					
I take whatever happens to me as my Destiny ( <i>al-qadar</i> ).					

Quran is the last book revealed by Allāh.					
I read the Holy Qur'an always.					
I believe Man (I am) is created mainly to worship Allāh.					
I give out charity more in the months of Ramadan.					
I attend <i>da'wah</i> programmes always.					
I try to stick to <i>Shari'ah</i> in all my undertakings.					

**(I) perception of consumers to certification construct**

Items	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
<i>Halāl</i> certification/logo signifies that the food is prepared strictly in compliance to <i>Shari'ah</i> .					
Genuine <i>halāl</i> food logo reduces food scandal and fraud.					
<i>Halāl</i> food certificate guarantees food safety.					
<i>Halāl</i> food certificate guarantees healthy food.					
<i>Halāl</i> food certificate guarantees food quality.					
Establishment of government <i>halāl</i> certification agencies would influence people to consume <i>halāl</i> food.					
Inclusion/Provision of <i>halāl</i> food Act in the rules and regulations of NAFDAC will stimulate the consumption of <i>halāl</i> food.					

**(J) Perception of Muslim consumers on *halāl* food logistics**

Item	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Separation of <i>halāl</i> food from non <i>halāl</i> food during conveyance would increase consumers' trust in <i>halāl</i> food products.					
Separation of <i>halāl</i> food from non <i>halāl</i> food would preserve <i>halāl</i> food from cross-contamination.					
Segregation of <i>halāl</i> food from non					

<i>ḥalāl</i> food would remove doubt of <i>ḥalāl</i> food originality.					
I will not buy <i>ḥalāl</i> food products produced by any company that processes non- <i>ḥalāl</i> food in the same premises.					
I will buy <i>ḥalāl</i> food products that are packaged with non <i>ḥalāl</i> foods whose materials do not leak.					
I will buy <i>ḥalāl</i> foods that are labeled with a widely accepted and approved logo.					
Designing a unique government <i>ḥalāl</i> logo would influence <i>ḥalāl</i> consumption					
Provision/approval of <i>ḥalāl</i> food kiosks for <i>ḥalāl</i> food products by the government will influence people to consume <i>ḥalāl</i> food.					

(K) Knowledge of Muslim consumers of *ḥalāl* terms

I understand the following Arabic terms on *ḥalāl* food:

Item	Yes	No
<i>Ḥalāl</i>		
<i>Ḥarām</i>		
<i>Sunnah</i>		
<i>Mustahābb</i>		
<i>Makrūh</i>		
<i>Shubhaat</i>		
<i>Ṭayyib</i>		
<i>Halālan Ṭayyiban</i>		
<i>Al-khabīthat/a-khabāith</i>		
<i>Dhibh</i>		
<i>Dhabīhah</i>		
<i>Maytah</i>		
<i>Al-damm</i>		
<i>Khinzīr</i>		
<i>Al-khamr</i>		
<i>Bahīmah al-an'ām</i>		

**UNIVERSITY OF IBADAN**  
**DEPARTMENT OF ARABIC AND ISLĀMIC STUDIES**  
**PhD Thesis**

***ḤALĀL* FOOD ADMINISTRATION IN SOUTH WEST NIGERIA**

***ḤALĀL* Food Administration Questionnaire (HFAQ) for Health Workers**

**Introduction**

This questionnaire is conducted to discover the possible way(s) to administer *ḥalāl* food (food permitted by *Shari‘ah* for Muslims) in South West Nigeria effectively for Muslim consumption and non- Muslims to benefit from the health advantages. Your sincerity and objectivity will help to get true and clean outcomes/findings. This questionnaire is mainly academic research. Thus, you are assured of keeping your responses confidentially and safeguard your personality.

Section A: Demographic Profile/ Respondents' Bio data. Please tick as appropriate.

<b>Gender</b>	<b>Tick</b>
Male	
Female	

<b>Ethnicity</b>	<b>Tick</b>
Yoruba	
Hausa	
Igbo	
Others	

<b>Age</b>	<b>Tick</b>
18-25	
26-30	
31-35	
36-40	
41-45	
46-50	
51-55	
56-60	
61 above	

<b>Religion</b>	<b>Tick</b>
Islām	
Christianity	
Traditional religion	
Others	

<b>Level of education</b>	<b>Tick</b>
Primary	
Secondary school	
OND/NCE	
HND/1 <sup>st</sup> Degree	
M.A/Msc	
PhD	
Others	

<b>Section</b>	<b>Tick</b>
Water supply and environmental sanitation	
Veterinary	
NAFDAC	
Others	

<b>State/place of residence</b>	<b>Tick</b>
Ekiti	
Lagos	
Ondo	
Ogun	
Osun	
Oyo	

<b>Source of <i>ḥalāl</i> knowledge</b>	<b>Tick</b>
Social media:	
Radio	
Television	
Newspaper	
<b>Mosque</b>	
Islāmīc programmes: <i>ta'lim/tadhkirah/</i>	

<i>weekly Islāmic program (asalatu) etc</i>	
Family	
Friend	
Teacher	

## SECTION B

**Instruction:** Five options are provided against each item as follows: Strongly agree, Agree, Neutral, Strongly disagree and Disagree. Please indicate your response by ticking (✓) the right option.

### A. Health workers' awareness on *ḥalāl* food

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I am familiar with the term <i>ḥalāl</i> .					
I am aware of <i>ḥalāl</i> food.					
I am familiar with the term <i>ḥalālantayyiban</i> .					
I (do) hear of <i>ḥalāl</i> slaughter (killing).					
I know some <i>ḥalāl</i> certification organisations in South West Nigeria.					
I have come across <i>ḥalāl</i> logos in some food products.					
I know that pork and its products are <i>ḥarām</i> .					
I know that alcohol and its products are <i>ḥarām</i> .					

### B. Health workers' Knowledge of *ḥalāl* food

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<i>Ḥalāl</i> food is food recommended for Muslim consumption					
<i>Ḥalāl</i> is anything that is permissible by <i>Sharī'ah</i> .					
<i>Ḥalāl</i> food is food prepared under strict adherence to <i>Sharī'ah</i> dietary law.					



Animal that is not slaughtered according to Islāmic rites is not edible for Muslim consumption					
NAFDAC regulations for animal slaughter cover Islāmic dietary law.					
<i>Ḥalāl</i> animal must be slaughtered invoking Allāh's name before the meat can be edible for Muslim consumption					

C. Health workers' perception of *ḥalāl* food

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<i>Ḥalāl</i> food is good for both Muslims and non-Muslims					
Animal slaughtered following NAFDAC regulations is edible for Muslim consumption.					
<i>Ḥalāl</i> food prevents food poisoning.					
<i>Ḥalāl</i> food improves and sustains personal health.					
<i>Ḥalāl</i> food guarantees food safety.					
<i>Ḥalāl</i> food prevents food poisoning.					

D. Health workers awareness of *ḥalāl* slaughter

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I am aware of <i>ḥalāl</i> way of slaughtering.					
I have knowledge of <i>ḥalāl</i> slaughter.					
I observe <i>ḥalāl</i> way of slaughtering at slabs during supervision.					
Muslim slaughterers usually slaughter at slabs to make the meat <i>ḥalāl</i> for Muslims' consumption.					
Animals are allowed to die off					

completely after slaughter before skinning.					
Separate utensils are used for <i>ḥalāl</i> meat carcass.					

### Knowledge of ḥalāl terms among health workers

I understand the following Arabic terms in *ḥalāl* food

Item	Yes	No
<i>Ḥalāl</i>		
<i>Ḥarām</i>		
<i>Sunnah</i>		
<i>Mustahabb</i>		
<i>Makrūh</i>		
<i>Shubhaat</i>		
<i>Tayyib</i>		
<i>Ḥalalan Tayyiban</i>		
<i>Al-khabīthat/al-khabā'ith</i>		
<i>Dhibḥ</i>		
<i>Dhabīhah</i>		
<i>Maytah</i>		
<i>Al-damm</i>		
<i>Khinzīr</i>		
<i>Al-khamr</i>		
<i>Bahīmah al-an'ām</i>		

Thank you for sparing your precious time.

**UNIVERSITY OF IBADAN**  
**DEPARTMENT OF ARABIC AND ISLĀMIC STUDIES**  
**PhD Thesis**

***ḤALĀL* FOOD ADMINISTRATION IN SOUTH WEST NIGERIA**

***ḤALĀL* Food Administration Questionnaire (HFAQ) for Primary Food Workers  
(employers and employees: abattoirs, poultries, restaurant workers and street  
food vendors)**

**Introduction**

This questionnaire is conducted to discover the possible way(s) to administer *ḥalāl* food (food permitted by *Sharī'ah* for Muslims) in South West Nigeria effectively for Muslim consumption and non- Muslims to benefit from the health advantages. Your sincerity and objectivity will help to get true and clean outcomes/findings. This questionnaire is mainly academic research. Thus, you are assured of keeping your responses confidentially and safeguard your personality.

Primary food workers include the entrepreneurs and the employees engaged in animal slaughter, fresh meat selling, canteen, cafeteria, restaurant and street food vendors and food hawkers.

Section A: Demographic Profile/Respondents' Bio data. Please tick as appropriate.

<b>Gender</b>	Tick
Male	
Female	

<b>Ethnicity</b>	Tick
Yoruba	
Hausa	
Igbo	
Others	

<b>Age</b>	Tick
18-25	
26-30	
31-35	
36-40	
41-45	
46-50	
51-55	
56-60	
61 above	

<b>Religion</b>	<b>Tick</b>
Islām	
Christianity	
Traditional religion	
Others	

<b>Level of education</b>	<b>Tick</b>
Primary	
Secondary school	
OND/NCE	
HND/1 <sup>st</sup> Degree	
M.A/Msc	
PhD	
Others	

<b>Srction</b>	<b>Tick</b>
Abattoir	
Bakery	
Restaurant	
Cafeteria/canteen	
Food hawkers	
Poultry	
Others	

<b>Position</b>	<b>Tick</b>
Manager	
Cook	
Servers	
Washer/cleaner	
Total	

<b>State/place of residence</b>	<b>Tick</b>
Ekiti	
Lagos	
Ondo	
Ogun	
Osun	
Oyo	

Source of <i>ḥalāl</i> knowledge	Tick
Social media:	
Radio	
Television	
Newspaper	
<b>Mosque</b>	
Islāmic programmes: <i>ta'lim/tadhkirah/ weekly Islāmic program (asalatu) etc</i>	
Family	
Friend	
Teacher	

## SECTION B

**Instruction:** Five options are provided against each item as follows: Strongly agree, Agree, Neutral, Strongly disagree and Disagree and as appropriate. Please indicate your response by ticking (✓) the right option.

### A. Awareness of primary food workers towards *ḥalāl* food

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I am aware of <i>ḥalāl</i> food.					
I have <i>ḥalāl</i> food knowledge.					
<i>Ḥalāl</i> food is common in my area.					
I sell <i>ḥalāl</i> food					
I am aware of <i>ḥalāl</i> food ingredients.					
I buy ingredients from <i>ḥalāl</i> sources.					
I am aware of <i>ḥalāl</i> slaughter.					
I am aware of <i>ḥalāl</i> beef					
I buy meat from <i>ḥalāl</i> source					
I am aware of <i>ḥalāl</i> food festivals.					

### B. Knowledge of primary food workers towards *ḥalāl* food

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
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<i>Ḥalāl</i> food is the only lawful food for Muslims.					
Alcohol and its products are unlawful for Muslim consumption					
Animal that is not slaughtered and its products are unlawful for Muslim consumption.					
Animal that Allāh's name is not invoked when slaughtered and its products are not lawful for Muslim consumption					Y
<i>Ḥalāl</i> food should be prepared using separate utensils					
<i>Ḥalāl</i> food should be separately stored from non <i>ḥalāl</i> food					
Muslim slaughterer must slaughter animal for Muslim consumption					
Ingredients from non <i>ḥalāl</i> source make the food products to become unlawful for Muslim consumption					

C. Perception of primary food workers towards *ḥalāl* food

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<i>Ḥalāl</i> food is spiritual for Muslims.					
<i>Ḥalāl</i> food is compulsory for Muslims.					
There is health benefit from <i>ḥalāl</i> food for consumers.					
<i>Ḥalāl</i> food benefits both Muslims and non Muslims.					
<i>Ḥalāl</i> food is hygienic.					
<i>Ḥalāl</i> food is tastier.					
<i>Ḥalāl</i> food is safe					
<i>Ḥalāl</i> food enhances quality of life of the consumers.					

D. Knowledge of primary food workers on *ḥalāl* slaughter

Item	Never Necessary	Unnecessary	Necessary	Very Necessary	Extremely Necessary
A Muslim must slaughter the cattle					
<i>Bismillah wa Allāh Akbar</i> is compulsory when animals are slaughtered					

Animals can be slaughtered in the presence of the other animals on the death roll					
The animal must be slaughtered with a single swift slit.					
Blood must be allowed to gush out completely from the body of the slaughtered animal before post slaughter processing commences.					
Animals are allowed to rest after long distance of conveyance before they are slaughtered					
The animal must be allowed to die off completely before skinning.					
Animals must not be dragged or beaten to the slab.					
Animals must be fed with <i>ḥalāl</i> feeds and substances.					
Beef, chicken and pork can be packed and cooked in the same container.					
Beef, chicken and pork can be cooked and stored in the same refrigerator.					
Cattle, chicken and pigs can be slaughtered with the same knife or equipment.					

E. Awareness of primary food workers on *ḥalāl* food certification

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I am aware of <i>ḥalāl</i> food					

certification.					
I am aware of <i>halāl</i> food certification agencies.					
I am aware of <i>halāl</i> food vendors with <i>halāl</i> certificate.					
I am aware of application procedure on <i>halāl</i> food certification.					
<i>Halāl</i> food agencies have visited my canteen for <i>halāl</i> food certification.					

F. Primary food workers' perception on *halāl* food certification  
*Halāl* certification indicates that...

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<i>Halāl</i> certification/logo signifies that the food is prepared strictly in compliance to <i>Shari'ah</i> .					
Genuine <i>halāl</i> food logo reduces food scandal and fraud.					
<i>Halāl</i> food certificate guarantees food safety.					
<i>Halāl</i> food certificate guarantees healthy food.					
<i>Halāl</i> food certificate guarantees food quality.					
Establishment of government <i>halāl</i> certification agencies would influence people to consume <i>halāl</i> food.					
Provides a comparative advantage over non <i>halāl</i> certified food service firms					
<i>Halāl</i> certification/logo signifies that the food is prepared strictly in compliance to <i>Shari'ah</i> .					



G. Primary food workers' perception on ḥalāl food logistics and procurement

Item	Never Necessary	Unnecessary	Necessary	Very Necessary	Extremely Necessary
Packaging and labeling of ḥalāl food should be in a contamination-free environment.					
Training of personnel towards ḥalāl food processing enhances ḥalāl food quality and trust.					
Ḥalāl storage facilities will preserve the status of ḥalāl food products.					
Muslim workers should be in every critical control point in ḥalāl food production.					
Separate equipment should be used for ḥalāl food processing where non-ḥalāl food products are manufactured.					
Effective transportation system enhances ḥalāl food status.					

H. *rtanding of ḥalāl* terms among primary food workers

I understand the following Arabic terms in *ḥalāl* food

Item	Yes	No
<i>Ḥalāl</i>		
<i>Ḥarām</i>		
<i>Sunnah</i>		
<i>Mustaḥābb</i>		
<i>Makrūh</i>		
<i>Shubhāt</i>		
<i>Tayyib</i>		
<i>Ḥalālan Tayyiban</i>		
<i>Al-khabīthat/al-</i>		

<i>khābā'ith</i>		
<i>Dhibh</i>		
<i>Dhabīhah</i>		
<i>Maytah</i>		
<i>Al-damm</i>		
<i>Khinzīr</i>		
<i>Al-khamr</i>		
<i>Bahīmah</i> <i>al-</i> <i>an'ām</i>		

Thank you so much for spearing your precious time.

**UNIVERSITY OF IBADAN**  
**DEPARTMENT OF ARABIC AND ISLĀMIC STUDIES**  
**PhD Thesis**

**ḤALĀL FOOD ADMINISTRATION IN SOUTH WEST NIGERIA**

**ḤALĀL Food Administration Questionnaire (HFAQ) for food firm employees-  
processed food workers**

**Introduction**

This questionnaire is conducted to discover the possible way(s) to administer *ḥalāl* food (food permitted by *Sharī'ah* for Muslims) in South West Nigeria effectively for Muslim consumption and non- Muslims to benefit from the health advantages. Your sincerity and objectivity will help to get true and clean outcomes/findings. This questionnaire is mainly academic research. Thus, you are assured of keeping your responses confidentially and safeguard your personality.

This is designed to extract information on *ḥalāl* food from the workers of processed food firms. These workers include the directors, managers, clerical officers, receptionists, mixers and machine operators working in processed food firms such as dairy, confectionery, beverages and bakery/ flour companies. Distributors and retailers of the products are also included.

Section A: Demographic factors of the respondents. Please tick as appropriate.

<b>Gender</b>	Tick
Male	
Female	

<b>Ethnicity</b>	Tick
Yoruba	
Hausa	
Igbo	
Others	

<b>Age</b>	Tick
18-25	
26-30	
31-35	
36-40	
41-45	
46-50	
51-55	
56-60	
61 above	

<b>Religion</b>	<b>Tick</b>
Islām	
Christianity	
Others	

<b>Position</b>	<b>Tick</b>
Director/manager	
Clerical officer	
Receptionist	
Mixer	
Machine operator	
Distributor	
Retailer	
Total	

<b>State/place of residence</b>	<b>Tick</b>
Ekiti	
Lagos	
Ondo	
Ogun	
Osun	
Oyo	

<b>Source of <i>ḥalāl</i> knowledge</b>	<b>Tick</b>
Social media:	
Radio	
Television	
Newspaper	
<b>Mosque</b>	
Islāmic programmes: <i>ta'lim/tadhkirah/</i> <i>weekly Islāmic</i> <i>program</i> <i>(Asalatu)</i> etc	
Family	
Friend	
Teacher	

SECTION B

**Instruction:** Five options are provided against each item as follows: Strongly Disagree, Disagree, Neutral, Agree and Strongly Agree. Please indicate your response by ticking (✓) the right option.

A. Awareness of food firm employees (processed food workers) towards *halāl* food

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I am aware of <i>halāl</i> food as recommended food for Muslim consumption.					
This firm produces <i>halāl</i> food in compliance with shariah.					
This firm ensures that the environment fulfils/ meets up with <i>halāl</i> food processing guidelines.					
This firm observes HACCPs (Hazard Critical Control Points) in the food processing.					
The firm uses separate equipment for <i>halāl</i> food where the firm produces non- <i>halāl</i> food.					
I am aware of non- <i>halāl</i> food.					
The firm is certified by standard <i>halāl</i> certification body.					
I am aware of <i>halāl</i> promotions					
I am aware of <i>halāl</i> food festivals					
I am aware of <i>halāl</i> food market					
I am aware of economic advantages of <i>halāl</i> food production					

B. Knowledge of food firm employees (processed food workers) towards *halāl* food

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<i>Halāl</i> food is the only lawful food for Muslims.					
Alcohol and its products are unlawful for Muslim consumption					
Animal that is not slaughtered and its products are unlawful for					

Muslim consumption.					
Animal that Allāh's name is not invoked when slaughtered and its products are not lawful for Muslim consumption					
<i>Halāl</i> food should be prepared using separate utensils					
<i>Halāl</i> food should be separately stored from non <i>halāl</i> food					
Muslim slaughterer must slaughter animal for Muslim consumption					
Ingredients from non <i>halāl</i> source make the food products to become unlawful for Muslim consumption					
<i>Halāl</i> food is beneficial to only Muslims					
Any worker who has direct contact with materials, ingredients or equipments used in the preparation of <i>halāl</i> food must be free from communicable diseases.					
The employee must ensure that the suppliers of ingredients have knowledge of <i>halāl</i> food requisites.					

C. Perception of food firm employees (processed food workers) towards *halāl* food

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<i>Halāl</i> food is spiritual for Muslims.					
<i>Halāl</i> food is compulsory for Muslims.					
There is health benefit in consuming <i>halāl</i> food.					
<i>Halāl</i> food benefits both Muslims and non Muslims.					
<i>Halāl</i> food is hygienic.					
<i>Halāl</i> food is tastier.					
<i>Halāl</i> food is safe					
<i>Halāl</i> food is clean					
Using detection and screening devices guarantee <i>halāl</i> food status.					

D. Food firm employees' (processed food workers) perception on *halāl* food certification

I perceive that *halāl* certification will...

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Reduce food fraud					
Make the firm produce <i>halāl</i> food in compliance with Shari'ah.					
Make the firm to ensure that it provides environment that fulfils/meets up with <i>halāl</i> food processing guidelines.					
Encourage the firm observe HACCPs in the food processing.					
Make the firm to use separate equipment for <i>halāl</i> food where the firm produces non- <i>halāl</i> food.					
Guarantee that the <i>halāl</i> logo of the firm is authentic					
Promote the firm's sales					
<i>Halāl</i> certification can hike the prices of the products as well.					
<i>Halāl</i> certification can encourage the firm to become an exporter of <i>halāl</i> food					
Enhances quality of life of the consumers.					
Guarantees traceability of <i>halāl</i> food certificate.					

E. Food firm employees' (processed food workers) perception on *halāl* food logo

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<i>Halāl</i> logo provides assurance of <i>halāl</i> food compliant products.					
Government certified <i>halāl</i> logo will reduce doubt on <i>halāl</i> logos in the market.					
<i>Halāl</i> logo generates awareness on <i>halāl</i> food consumption.					
<i>Halāl</i> logo guarantees that the food is authentic <i>halāl</i> .					
A unique and single logo for Nigeria guarantees the originality of <i>halāl</i> logo in the market.					

Attaching punishment to fraud in <i>ḥalāl</i> logo will guarantee customers' confidence on <i>ḥalāl</i> logos in the market.					
<i>Ḥalāl</i> logo should contain inscription that can be easily identified by the consumers.					
<i>Ḥalāl</i> logo clarifies doubt of food origin					
<i>Ḥalāl</i> food certificate is a trademark on its own					
<i>Ḥalāl</i> logo ensures easy recognition of food products					
Uniformity of <i>ḥalāl</i> logo strengthens the reliability of <i>ḥalāl</i> food status					

F. Food firm employees' (processed food workers) perception on *ḥalāl* food logistics and procurement

Item	Never Necessary	Unnecessary	Necessary	Very Necessary	Extremely Necessary
Packaging and labeling of <i>ḥalāl</i> food should be in a contamination free environment.					
Training of personnel towards <i>ḥalāl</i> food processing enhances <i>ḥalāl</i> food quality.					
Dedicated warehouse preserves the status of <i>ḥalāl</i> food products.					
<i>Ḥalāl</i> trained Muslim workers should be in every critical control point in <i>ḥalāl</i> food production.					
Separate equipment should be used for <i>ḥalāl</i> food processing where non- <i>ḥalāl</i> food products are manufactured.					



Detection and screening devices should be used by firms to ensure <i>ḥalāl</i> status of the raw materials.					
All information on the ingredients used for the <i>ḥalāl</i> food must be clearly provided on the packages.					
There should be mutual Knowledge between <i>ḥalāl</i> food suppliers and the manufacturers.					
Effective transportation system enhances <i>ḥalāl</i> food status.					

G. Knowledge of food firm employees (processed food workers) of *ḥalāl* terms  
I understand the following Arabic terms in *Ḥalāl* food

Item	Yes	No
<i>Ḥalāl</i>		
<i>Ḥarām</i>		
<i>Sunnah</i>		
<i>Mustaḥabb</i>		
<i>Makruh</i>		
<i>Shubhaat</i>		
<i>Tayyib</i>		
<i>Ḥalalan Tayyiban</i>		
<i>Al-khabithat/al-khabā'ith</i>		
<i>Dhibḥ</i>		
<i>Dhabihah</i>		
<i>Maytah</i>		
<i>Al-damm</i>		
<i>Khinzir</i>		
<i>Al-khamr</i>		
<i>Bahimah al-an'am</i>		

## **Appendix D**

### **List of publications**

The researcher was able to publish three articles from the thesis before final defence.

1. Kareem, M. K. and Situ, W. A. (2021). *Halal Food Certification Bodies' Perception Towards International Accreditation Bodies*, Journal of Religions and Contemporary Issues. University of Lagos, Lagos. Vol 1 p. 282 – 299.
2. Kareem, M. K. and Situ, W. A. (2020). Health Workers' Awareness of *Ḥalāl* Food and Shariah Compliant Way of Slaughtering Animals in South West Nigeria. Al-Fikr Journal of Arabic and Islamic Studies, Department of Arabic and Islamic Studies, University of Ibadan, Ibadan. Vol 32, p. 33.
3. Situ, W. A. (2021). *Awareness of Halal Food Among Muslim Consumers in Lagos and Ogun States of Nigeria*, Ilorin Journal of Religious Studies, University of Ilorin. Vol 11 No. 2 Dec., 2021.