

Indigenous Technology and Weapons Fabrication during the Nigerian Civil War, 1967–1970.



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Abstract

This study focuses on Indigenous technology and weapons fabrication in the southeastern geopolitical zone of Nigeria. The study centers on documentation of the inventions, innovations, and improvisations developed by the research and production unit of Biafra during the Nigerian civil war, it analyses the impact of the weapons during the Nigerian civil war. The study uses an interdisciplinary approach in the collection of data, while chronological and descriptive methods were used in the analysis and presentation of the collected data. Primary and secondary sources were used in the collection of data. This study finds that the government made an effort to ensure the continued fabrication of indigenous technology on weapons and the assimilation of Biafra scientists after the Nigerian Civil War. It further found out that the primary causes of Nigeria's overdependence on foreign military technology or hardware were her negligence in harnessing and exploring the military technological revolution uncovered during the Nigerian Civil War; if she had done that, Nigeria would have been technologically sound and independent. The paper concludes that Nigeria has what it takes to attain scientific and technological development if only it can embrace, harness, and explore indigenous technology uncovered during the Nigerian Civil War.

Key words: *Civil War, Indigenous Technology, RAP, National Development, Weapons Fabrication.*

Introduction

Science and technology play a crucial role in the production of military technology and the execution of successful warfare, which is significant for the national security and national defence of any society. This is because no society can exist permanently without paying adequate attention to military technology. These entails that military technology is considered very paramount for the maintenance of the existence of any society, the advancement of science and technology led to equal advancement in military technology which brought about revolution in strategy, tactics and operational art in warfare, because man in his state of nature is a warlike individual, conversely, a society in its state of nature is a warlike society. Based on that fact, communities, kingdoms, empires and villages across human civilization and epoch, be it Ancient, medieval and contemporary or modern era established military research industry for the production of military technology for expansion of their frontiers, defence, self-preservation and protection of their territorial integrity against any threat of any kind, be it internal and external that tends to threaten the corporate existence of their society for national security and national defence perspective; which had a great impact on geopolitics and geostrategic study of the world.

However, military technology expands warfare frontiers from the horizontal level to the vertical level of military alliance and coalition buildup, it commands height in operational effectiveness and battle management. The nature and character of military technology made a difference in offensive and defensive strategies across ages and human epochs; nevertheless, revolution in military technology altered the course of war and served as a determinant factor in ascertaining success in warfare. Moreover, no generation has ever thought of or conducted warfare beyond its military technology.¹ Indigenous technology, otherwise known as blacksmith technology, played a pivotal role in warfare by fabricating and repairing arms and ammunition for combatants in warfare. Since no nation can survive or endure indefinitely without the possession of advanced military technology, this military capability can dissuade adversaries from attempting incursions, as they understand the potential for severe retaliation or reprisals. For instance, North America and Europe have achieved technological prowess globally by embracing the scientific and technological revolutions of the 17th and 18th centuries in Europe, followed by the 19th-century industrial revolution.² Similarly, the Asian Tiger, which includes South Korea and China's has advanced technologically through their adeptness in exploring and harnessing their indigenous technologies. As a result of that, Adetola et al. and Anaeto et al. emphasize that Nigeria and Africa as a whole lagged in technological development because they have not fully capitalized on their indigenous technological revolutions.³ These countries could greatly enhance their global competitiveness by leveraging and advancing their indigenous

¹ Aja Akpuru-Aja, *War Studies*, (Abuja: CISS, 2006), 17-98.

² Felix N. C. Oragwu, "Scientific and Technological Aspects of the War-Machine in Biafra" in Tekena N. Tamuno and Samson C. Ukpabi, (eds), *Nigeria Since Independence: The First Twenty-Five Years*, (Ibadan: HEBOOK, 1989), 213-215.

³ Uzodigwe Adolphus et al "Indigenous Technology (I-Tech) and National Development in Nigeria: The civil war experience", *Bassey Andah Journal* Vol. 14, No. 1, (2021), 195.

technological capabilities. The development of indigenous technology is crucial for national progress, as it represents a longstanding tradition of innovation in Nigeria. This development process has evolved gradually from crude attempts to sophisticated stages, reflecting a deeper understanding of the local environment, but they failed to harness and explore the indigenous technological revolution that occurred in their countries. This studies examine the indigenous technology and weapons fabrication in the Southeastern region of Nigeria during the Nigerian Civil War. This paper explores the invention and innovation made by the research and production (RAP) unit of Biafra and investigates the impacts of the weapons during the Nigerian Civil War.

Overview of the Nigerian Civil War

The Nigerian Civil War began in 1967 and ended in 1970. The war was perceived as a harrowing conflict that unfolded between the Federal Republic of Nigeria, led by Colonel Yakubu Dan-Yumma "Jack" Gowon (later General Gowon), and the Eastern Region of Nigeria, known as Biafra. A lot of factors like ethnic conflict, economic inequality, educational disparities, the introduction of a unitary system of government by Ironsi, and inability of Ironsi to punish coup plotters contributed immensely to the outbreak of the Nigerian civil war. These and more culminated in the declaration of the Republic of Biafra on 30th May, 1967, under the leadership of Lt. Colonel Chukwuemeka Odumegwu Ojukwu. But before the declaration was made, on May 27, 1967, Gowon redrew Nigeria's administrative divisions by creating twelve new states, thereby reshaping regional dynamics. Which the Nigeria government perceived as police action that required surgical operation, just to go to Enugu apprehend Ojukwu and his cohort and the war would come to an end, but the war lingered beyond their expectation as a result of the resourcefulness of the people of Biafra in cultivating indigenous technology and weapons fabrication in the Southeastern region of Nigeria. When Nigeria realized that the issue on the ground was beyond police action, a full-fledged war and economic blockade were declared on 6th July 1967, and the war ended on 15th January 1970. At the end of the war, between 500,000 to 3000,000 people were estimated or assumed to have perished during the war.⁴

Weapons Fabrication

These comprise all the military technology, such as arms, ammunition, structures, and vehicles produced by the research and production unit of Biafra and deployed to warfare during the Nigerian-Biafra Civil War.

⁴ Dan Okey Chukwu, "The Challenges of the Biafran War Technologies" Armstrong Matiu Adejo (edition), *The Nigerian Civil War: Forty Years After, What Lessons?*, (Benue: Aboki Publisher, 2008), 92.

The Biafra Red Devil (Armored Car)



Biafra Red Devil TYPE A



BIAFRA RED DEVIL TYPE B



Biafra Red Devil Type C



Biafra Red Devil Type D

Source: from the National War Museum, Umuhia

Mrs. Evelyn Osuagwu avers that Red Devils were divided into different categories and types, such as A1-A5, B, C, and D. Types A1-A5 had a total of twelve (12) wheels, six (6) on each side, fitted with a rolling chain obtained from a caterpillar. The people of Biafra felt that Red Devils were a solution to the Saladin, Saracen, Panhard, and Ferret, among others. The tops of the Red Devils were covered with heavy steel to give the crew members more protection, and they were fitted with a Browning machine gun. Type A1, for instance, had a height of 11 feet, two (2) inches long, and eight (8) feet wide. Type D was built with a turret that could rotate and fire at 360 degrees, which changed the course of the war on the side of Biafra. Types A and B were the first armored cars produced by RAP and were called Troop Carrier, which carried troops from a particular battle front to another, and shooting was done manually. The Red Devil was produced with a scrap caterpillar, a locomotive engine, and a Range Rover. One of the major challenge of the red devils during the Nigerian Civil War was that, it was too sluggish in movement because of the Iron or metals used to produces it, it takes longer time before it get to the battlefield, it generate a lot of heat, that was why when it move for an hour, you have to stopped and allowed the heat to cool down for some minutes or hours before you can continued, this type of armament is not advisable to be use on a quick response to an attack. It easily lost its track; it was destroyed by the federal anti-tank guns. However, as time goes on, the research and production unit notes some of these challenges and begins to improve and perfect them. The firing range of the Red Devil was 300 to 400 meters, and the enemies must be within the killing range before you can fire the weapons.⁵

⁵ Evelyn Osuagwu, 60+, Mrs., Curator, Umuhia Abia State, 10/11/2026.

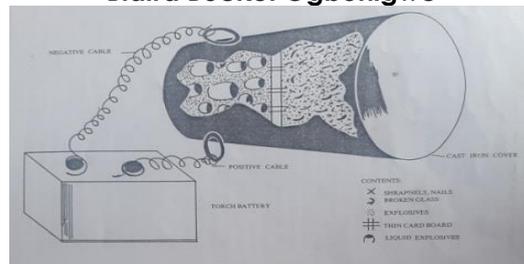
Flying Ogbunigwe Produced By Biafra



Source: from the National War Museum, Umuahia

Late Chief Engr. Dr. Emmanuel Iwuanyanwu, the immediate past president of Ohanaeze Ndigbo posits that among the entire landmine produced by Research and Production Unit, flying Ogbunigwe was the most sophisticated, lethal and devastating one, it was the first rockets to be designed, developed, and massively produced for about 500 units per day in Biafra land, launched in Africa, in 1967 before South Africa launched theirs in December 1968. Flying Ogbunigwe, otherwise known as non-guided rockets propelled missiles, was also seen as ground-to-air missiles, ground-to-surface, ground-to-ship missiles, and anti-tank missiles designed to be used as a defensive strategy against the Nigerian MiG-15 fighters marauding the Enugu airport. The rocket missiles were constructed with iron metal of two(2) meters long, 33 centimeters in diameter, electrically ignited, propelled by a rocket fuel, launched from a constructed launch pad, and had a high explosive warhead which was designed based on the Monroe effect. The warhead was a cast metal with a hollow that contained explosive chemical, gunpowder, 90-degree arc radius shrapnel with about 180 to 800 killing range, and the missile's range was 8 kilometers.⁶

Biafra Bucket Ogbunigwe



Source: from the National Archive Enugu

Reuben Ogbudinkpa alluded that Ojukwu, bucket otherwise known as Ogbunigwe, was the most sophisticated landmine amongst all. Ojukwu bucket comprises a bucket with a cast iron metal that rotates up to 360 degrees. Inside the bucket, it contains explosive chemicals like petroleum and liquid chemicals put inside plastic containers and corked to avoid evaporation, as indicated above. Then plywood was placed on top of the plastic chemical

⁶ Emmanuel Iwuanyanwu, 70+, Chief Engineer, Politician, Owerri Imo State, 12/01/2024.

before the dry explosive, like gunpowder, was applied on top of the plywood, as well as shrapnel of different kinds, before the casted bucket would be sealed off. The casted iron metal must be thick enough to resist any pressure that would emanate when the bucket is fully charged. At the lower base of the bucket, a hole was perforated, and positive and negative wire was connected from it to the battery for charging and detonating. The narrowness of the base of the bucket was designed to generate great commotion between explosives and shrapnel, while the bell-shaped form of the bucket helped in directing and concentrating traffic on the target. However, the best position to place Ogbunigwe, otherwise known as the mass killer, was by the side of the road and not in the middle of the road. One thing about this Ogbunigwe was that it was a wicked device; once detonated, it doesn't spare anyone around it. That is, once Ogbunigwe was detonated, it caused devastating damage to both the structures within the killing range, personnel, vehicles, and properties. The killing range was between 50 to 100 meters, while the destructive range was between 30 to 50 meters, depending on the contents of the explosive chemical and shrapnels.⁷

Biafra Foot Cutter

Reuben Ogbundikpa further posits that Foot cutters were an anti-personnel improvised device which were in the form of cannon firing, which was a common practice used by the southern part of Nigeria. Particularly, the Southeastern geopolitical zone during ceremonies like funerals, traditional weddings, and coronation before the outbreak of the war. When the Nigerian Civil War broke out, the people of Biafra began to ponder on what to do, how to convert the cannon into weapons of war, which they succeeded in doing by coming up with the idea of the foot cutter. The foot cutters were in the form of the T-shape pipes with the height of a human knee, dug inside the ground and filled with explosive chemical, gunpowder, and shrapnel of different kinds, The foot cutters were linked together with gunpowder and the T-pipes always faced towards an upcoming enemy. The pipes were set ablaze by the detonator. Once the enemies get to the killing range, the foot cutter would cut off the foot of the enemies, causing them to suffer a severe injury. The foot cutter was primarily designed to maimed, injured rather than to killed soldiers but to incapacitate them by reducing the fighting strength of the enemies, The foot cutter were made from salvage material like scraps metal, nails and other sharp objects that could be repurposed into other makeshift weapons, the disadvantages of the foot cutter was that the advance guards of the infantry would be affected and sustained a severe injury but the rear guard would not be affected and you must step your foot on the foot cutter before it will cut your foot.⁸

⁷ Nwabueze Reuben Ogbundikpa, *The Economics of The Nigerian Civil War and its Prospects for National Development*, (Enugu: Fourth Dimension Publisher Coy LMT, 1985),32.

⁸ Ogbundikpa, ...,30.

Biafra Rocket

The Biafra rocket was a rudimentary missile system developed by the breakaway Republic of Biafra during the Nigerian Civil War. Created using locally sourced materials and improvised technology, the Biafra rocket was inspired by captured rockets of the Federal Republic of Nigeria. Biafra scientists, engineers, and technicians dismantled and studied these captured rockets and began to produce a similar type. They used salvaged metal pipes and scrap materials, which were cut, shaped, and welded to form the rocket body. Each half of the hollow rocket was filled with explosive chemicals and shrapnel, and a warhead was attached to the front before welding the halves together. The tail fins were added to maintain balance and control during flight. The resulting rockets were small, short-range projectiles, approximately 18 inches long and 3 inches in diameter,⁹ according to Ikenna Nzimiro. He alluded that the rocket was 6 inches long and could not move more than 10 miles.¹⁰

Biafra Hand Grenade

Ogbundikpa stresses that the Hand grenade was in the form of an oval shape, the grenade was fabricated with casted hollow iron metal filled with locally made explosives such as liquid chemicals, gunpowder, and shrapnels. Delay action fuse thread was tightly cork with cast iron metal to the head of the hand grenade, launching the hand grenade required the removal of the delay action fused with the teeth before throwing it to an upcoming enemy, as the delay action fuse was removed, it would force the cast iron to scratch the wire in the delay action fused which would ignite fire, sparked the explosive soaked with the thread, it can be throw to the upcoming enemy that would take two to five seconds to explode. It was seen as an anti-tank and anti-personnel weapon, only used for short-range attacks.¹¹

Biafra Napalm Bomb

Engr. E. O. Kaine averred that Napalm was an incendiary bomb that burned intensely more than gasoline once it had an impact with a target; napalm burned at a temperature ranging from 800 to 1200 degrees Celsius, which made it more lethal than any other bomb. Napalm was used for both air and ground operations, but was mostly deployed from aircraft for aerial bombardment. On the ground, it was deployed by the Biafra infantry unit. The people of Biafra produced napalm using aluminum soap mixed with naphthenic acid obtained from crude oil, palmitic acid obtained from coconut oil, and gasoline. The napalm mixture was poured into simple metal containers, which could be improvised from materials such as oil drums or other cylindrical objects. These bombs were designed to ignite upon impact, often using a simple fuse mechanism. The lethal radius of napalm ranges from 20 to 40 meters,

⁹ Ogbundikpa, ...,26.

¹⁰ Ikenna Nzimiro, *Nigerian Civil war: A Study in Class Conflict*, (Enugu: Frontline Publishing Ltd, 1982), 211.

¹¹ Ogbundikpa, ...,18.

depending on the size and quantity of the napalm, while the destructive radius extends about 50 meters or more, depending on environmental conditions such as wind and the presence of flammable materials, buildings, vegetation, and other structures in the area. The napalm was used by the Biafra forces to repel the Nigerian troops at the battle of Aba, Owerri, Onitsha, Nsukka, and Port Harcourt.¹²

Biafra Bullet or Cartridge

Siasia Ugwumba Nwokedi alluded that the Biafra cartridge or bullet was produced as soon as their pre-war stockpiles of bullets got exhausted. Biafra turned to local materials to produce bullets to support their war effort. They studied the specifications of their guns and adjusted their drill machines to produce bullet casings from cast brass and other locally sourced metals. These casings were filled with explosives, liquid chemicals, gunpowder, shrapnel and casted brass was used to cork the head of the bullet. Spherical or conical lead projectiles, sourced from repurposed car batteries and pipes, were melted down and cast into molds to form bullet cores, which were then shaped and sized with improvised molds or presses. The resulting bullet casings, a combination of cast projectiles and propellant, were used by Biafra infantry for both offensive and defensive operations. The production of these bullets significantly boosted the morale and fighting spirit of Biafra soldiers.¹³

Biafra Helmet

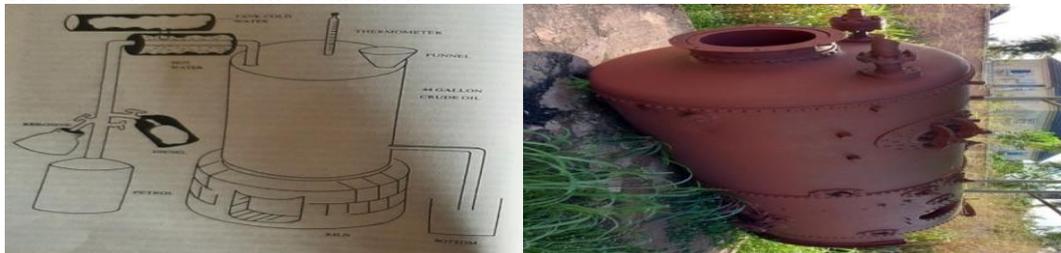
Reuben Ogbudinkpa postulates that the Federal government's war of strategies against the Indigenous Republic of Biafra led the Research and Production Unit of Biafra to produce a protective helmet for Biafra soldiers. This helmet was designed to shield their heads from the shrapnel of the Federal Government army's weapons. In conflicts between the two factions, the heads of armed forces are often targeted because shrapnel injuries to the head are believed to be more lethal than those to other parts of the body. Therefore, it became crucial for Biafra leaders to adopt measures to protect their soldiers if they hoped to win the war. Consequently, the idea of manufacturing helmets was initiated by the Research and Production Unit (RAP) of Biafra. The RAP used both soft and hard steel in the production of Biafra helmets. Initially, cardboard was used to create prototypes by folding it into shapes resembling human heads in their underground workshop. Following this success, the research and production unit confidently proceeded to fabricate helmets by cutting sheet metal into various sizes and forming them into half-moon-like bowls using human head-shaped molds. This process involved machines that could shape and cast the metal sheets, resulting in the production of Biafra military helmets. However, fiber, foam, cloth, and rubber were glued inside the helmet to make it more comfortable for the soldiers.¹⁴

¹² E. O. Kaine, 80+, Engineer, Retired Director of PRODA, Enugu, 25/11/2023.

¹³ Siasia Ugwumba Nwokedi, 70+, Mr., Retired Biafra Soldier, Umuahia Abia State, 14/11/2023

¹⁴ Nwabueze Reuben Ogbundikpa,24.

Biafra Bush Petroleum Distillation



Source: from the National Archive Enugu

Reuben Ogbundikpa avers that Refining began by filling the 44-gallon drum with crude oil, a large fire was set under the drum, standing on a high kiln was standing while the control taps and product exit taps were locked. It has to be remarked that coal from the Udi coal field was used when the federal army had not taken over Enugu. With the loss of Enugu and its coal supplies, many of the scientists with the knowledge of blacksmithing in pre-Civil War Nigeria find alternative sources of heat. They resorted to the use of hard wood trees like Iroko trees and oil bean tree trunk, etc, which they believed could do the same job. Super petrol, Kerosene, and Diesel could be produced by heating the content of the refinery to a temperature of about 120 to 180 degrees Celsius; the petroleum product produced was known as super. At this point, the tap that discharged super petroleum could be turned on so that the product had to pass through the well-designed system of ice-cold water to the super receptacle. From the foregoing, it should be noted that the people of Biafra produced petrol at a temperature of less than 120 degrees Celsius. However, such a product is of low-octane wreck, and rattle engine while in action because it does not generate enough propulsive force. When the temperature is between 180 to 190 degrees Celsius, it leads to the production of Kerosene, but if the heating temperature is between 190 to 210 degrees Celsius, it leads to the production of Diesel, while heating above 210 degrees Celsius would lead to the production of lubricant oil. The pertinent question worth asking by anyone was that when did these Biafra scientists usually expect petrol, kerosene and diesel, that is, how did they know that the heating or temperature of a particular product has gotten to a given temperature, they get to know that through the use of thermometer to ascertained the temperature level of a given heat and the particular product to expect at a given temperature.¹⁵

Biafra Mortar Bomb

The people of Biafra inherited the mortal barrel from the Nigerian First Battalion during the pre-Civil War era. The Biafra scientists, engineers, and technologists, otherwise known as RAP, dismantled the mortar barrels such as 6 x 81mm and 6 x 3 inch, stationed at Enugu. Study its makeup; through replicative spirit, they were able to fabricate a similar armament by trial

¹⁵ Ogbundikpa, ...45-47.

and error with local resources. Their invention and innovation were mostly short-range, low muzzle velocity, but high arch trajectory contrivances for throwing pyrotechnic bombs. The mortar was used against Nigerian forces at Abagana, which destroyed about 102 Nigerian convoys.¹⁶

IMPACT OF THE WEAPONS DURING THE NIGERIAN CIVIL WAR

The weapons produced and used by the people of Biafra during the Nigerian Civil War had both positive and negative impacts; we shall consider the impact one after another.

1. Proliferation of arms and ammunition: Proliferation of arms and ammunition impacted negatively during the Nigerian Civil War; the conflicting parties delved into the importation of arms and ammunition across their national borders for the prosecution of the war. On the side of Nigeria, Britain, Russia, Egypt, Chad, the United States, Canada, Syria, Saudi Arabia, Algeria, Bulgaria, etc, gave military assistance to Nigeria. However, on the side of Biafra, South Africa, Israel, France, Portugal, Tanzania, the Ivory Coast, Gabon, Zambia, Spain, Haiti, and what have you, gave military aid to the people of Biafra via humanitarian support. The importation of the arms and ammunition into Nigeria by the belligerents coupled with the locally fabricated weapons, produced by the Research and production (RAP) unit of Biafra and the Defense Industries Corporation of Nigeria (DICON) made arms and ammunition awash and available in large quantities in Biafra land in particular and Nigeria at large. To the extent that it was used for criminal purposes during and post-war era.¹⁷
2. Increase in Insecurity and Armed Robbery: Heightened tension of insecurity and armed robbery was another negative impact of the weapons during the Nigerian Civil War. Alex Amaechi Ugwuja argues that the proliferation of small arms and light weapons during the Nigerian civil war heightened insecurity, robberies, and created a security dilemma in the entire Biafra land. The insecurity and robberies were necessitated by hunger, economic hardship, and the financial condition of life was deplorable in Igboland within the period and after the Nigerian Civil War. However, insecurity in the land heightened to the extent that the lives, properties, liberty, and freedom of people were jeopardized and threatened. Based on that, the federal government of Nigeria decided to intervene in the matter. The then military head of the state in the person of General Yakubu Gowon on 8th August, 1970 promulgated a decree title "The Robbery and Firearms Special Provision Decree No 47 1970" the decree was aim to curb small arms and light weapons proliferation as well as the attendant criminality especially armed robbery in the Southeastern region of Nigeria

¹⁶ Ogbundikpa,....22-24.

¹⁷ Alex Amaechi Ugwuja, "Biafra arms Challenges and the Politics of Weapons Procurement, 1967 – 1970" *IJOHIS* Vol. 8, No. 2, (2018), 65-67

in particular and Nigeria at large.¹⁸ However, Alex Amaechi Ugwuja further stated that the insecurity in the land heightened when most of those who worked in the Research and Production (RAP) unit of Biafra began to set up blacksmith shops for the fabrication of arms and ammunition after the Nigerian Civil War¹⁹. The above assertion was corroborated by Obasi Igwe who argues that in January 1970 when the Nigerian civil war was brought to an end, that there were plethora of arms and ammunition lying loosely across the Igboland and a large number of young people demobilized from the army without reintegrating them into the society, these able bodied men resorted to armed robbery attack as a means of livelihood²⁰. Paul Obi-Ani avers that another significant factor that heightened the tension of criminality, armed robbery, and kidnapping in Igboland was the de-Biafranization and the declaration of the Biafra currency illegal immediately after the conclusion of the war²¹. Aja Kpuru-Aja avers that child soldiers were another factor that fuel insecurity, robbery, and criminality in Biafra land. Those Biafra soldiers recruited within the environment of September 1968 were below 18 years old, who had no other skills except arms skills resorted to robberies at the end of the war.²²

3. Violation of Human Rights and International Humanitarian Law: violation of human rights and international humanitarian law was another negative impact of the weapons during the Nigerian Civil War. The weapons used by the belligerents during the hostilities deprived the unarmed innocent citizens or civilians of their right to exercise their fundamental human right of freedom of movement. In such a situation, the armless civilians remain indoors throughout the conflict and hostility, as a result of the fact that they are always the target during the hostility, particularly during urban warfare; this violates their fundamental human rights. However, based on the quest of the combatants, belligerents, and parties to the conflict to influence one another during warfare. By killing the unarmed innocent civilians, which the international humanitarian law forbids, according to the provision of international humanitarian law, it provides that combatants should protect innocent civilians and their properties and not kill them or destroy their properties. This led to the violation of international humanitarian law.²³
4. Crippled Economic Activities to some extent: The weapons used by the belligerents during the hostilities negatively affected the economic activities in Biafra land in

¹⁸ Alex Amaechi Ugwuja, 65+, Dr., Senior Lecturer, Nnamdi Azikiwe University Awka, 18/12/2023.

¹⁹ Ugwuja, Interview.

²⁰ Obasi Igwe, 80+, Emeritus Professor, Retired Lecturer, Unn Enugu State, 17/11/2023.

²¹ Paul Obi-Ani, *Post Civil War Political and Economic Reconstruction of Igboland 1970-1983*, (Nsukka: Great AP Express Publisher LTD, 2009), 22-25.

²² Aja Akpuru-aja, 70+, Professor, Professor, Uturu Abia State, 11/11/2023.

²³ Colonel Frankonero Nganga, *Effect of Proliferation of small arms in sub-Sahara Africa*, (US: Army War College, 2008), 4-8

particular and Nigeria at large. This is because full economic activities were not going on then, but some pockets and marginal economic activities were going on here and there. The civilians that were engaged in the economic activities had to run away for their lives so that bullet or air strike otherwise known as weapons would not hit them, but the brave ones, like the business conscious and minded fellows took the risk and were hell-bent to do business irrespective of the circumstances they found themselves at that material time. As a result of that, economic activities collapsed to some extent, resources were depleted, and in all, economic instability became the order of the day in the southeastern region of Nigeria. And there was no economic development going on in the entire Southeastern region at that same point in time. The little one they managed to build or develop before the war was destroyed with the belligerent's weapons. The hostility scared investors away from investing in the Southeastern region because the environment wasn't conducive for investment, and no rational investors would like to invest in a conflict-prone environment. After the war, Nigeria began to rebuild what it had already built before the war.²⁴

5. Refugee Problem and Internally Displaced People: Another crucial impact of the weapons during the Nigerian Civil War was the encouragement of refugees and internally displaced people of Biafra from their homes. During the hostilities, a lot of Biafrans had to flee from their home and look for a haven where they could settle and shield themselves from the arms and ammunition of the belligerents in the interim or within the shortest period. So that immediately after the hostilities, they can go back to their home. Most of the people of Biafra went to churches, nearby towns, schools, internal camps, the forest, and some were flown to other countries of the world. After the war, most of the refugees who came back to their homes could not recognize their homes, their homes had been ravaged by weapons, and those flown to other countries like Gabon and Ivory Coast decided not to come back but went for political asylum.²⁵

Conclusion

In conclusion, this paper explores indigenous technology and weapons fabrication in the Southeastern region of Nigeria during the Nigerian Civil War. It examines the introductory overview of indigenous technology and weapons fabrication in the southeastern region; it further investigates an overview of the Nigerian Civil War and identifies the conceptual clarification. The study details the comprehensive weapons fabricated by the research and production unit of Biafra and analyzes the impact of the weapons. The study uncovered the essence of conducting thorough research on the indigenous technology and weapons

²⁴ Alex Amaechi Ugwuja, "The Nigeria – Biafra war and The Proliferation of Small arms and Light Weapons in Southeast Nigeria, 1967 – 2007" (Published Ph.D Thesis, Nnamdi Azikiwe University, Awka, Anambra State, 2017).

²⁵ Bonny Ibhawoh, "Refugees, Evacuees and repatriates: Biafra Children, UNHCR, and the politics of international humanitarianism in the Nigerian civil war" African study review, Volume 63, Number 3, (September 2020), 269-275.

fabrication in the southeastern region of Nigeria. However, the Nigerian Civil War began from 1967 to 1970, it was a war between Lieutenant Colonel Chukwuemeka Odumegwu Ojukwu, the military head of the state of the defunct Sovereign Republic of Biafra, and Col. Yakubu Gowon, the then military head of the state of Nigeria. Out of perceived injustice meted to the people of Biafra and inability of Gowon government to enforced Aburi accord compelled the then military governor of the Eastern region of Nigeria to declared the area under his influence as Sovereign Republic of Biafra which Nigeria government saw as a police action at the ab-initio that required a surgical operation, just to go to Enugu, apprehend Ojukwu and his cohort the war would come to an end. But the war lingered beyond the expectation of Nigeria due to the ability of Biafra to cultivate indigenous technology and weapons fabrication in the Southeastern region of Nigeria. Soon afterward, the Nigerian government declared a full-scale war and activated an economic blockade on the people of Biafra on 6th July 1967.

The economic blockade dealt a decisive blow to the people of Biafra, in the sense that it forestalled them from having intercourse with other countries of the world on both political, economic, socio-cultural, and strategic levels. The outcome of the blockade was hardship, hunger, suffering, starvation, and lack of access to foreign military technology. Based on that, the Biafra research and production unit uses its ingenuity to fabricate weapons used to defend the Biafra territory. This is made possible as a result of the fact that necessity is the mother of invention; the weapons were borne out of necessity. At that point in time or in the situation that the people of Biafra found themselves, they were left with no other option than to fabricate weapons to defend themselves, otherwise they would all perish. After the war, expectations were that the post-Nigeria Civil War government would harness and explore the military technology uncovered, and if it had done that, Nigeria would have gained independence in military technology and not depended on other countries of the world for our military arsenal.

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