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# **NEW TECHNOLOGY AND CHALLENGES OF THE BLACKSMITHING INDUSTRY IN AWKA: IMPLICATION FOR ENTREPRENEURSHIP DEVELOPMENT**

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## **Abstract**

The blacksmithing technology is as old as human civilization itself. Indeed the development of different human civilizations has been linked to the discovery and use of metal to manufacture tools and implements that supported an agrarian lifestyle. In Awka, Anambra State Nigeria, this occupation has come under intense threats associated with modernity. The paper attempts a theoretical analysis of threats associated with modernity as it affects the local blacksmithing industry, using the skill discretion model as analytical tool.

**Keywords – Blacksmithing, New Technology, Entrepreneurship, Awka**

## **Introduction**

The issue of modern technology and the blacksmithing industry brings to fore the contrast that exists between technology transfer and development of indigenous technology of the African people. The new technology is a welcome development but its introduction into the African continent is not without a consequence for the development of local traditional industries. One of such traditional industries is the blacksmithing industry which thrives on the discovery and mining of iron ore as well as on its local metal-smelting process. Iron technology was imbedded in the ways of life of ancient Africans (Neaher, 1979). In Nigeria, archaeological explorations and ethnographic studies reveal some of the earliest iron working sites such as Taruga in the north, located about 25kilometres west of Abuja in the federal capital territory and

dated to around 500BC, the Nok culture around Plateau dated to 5<sup>th</sup> century BC, Isundunrin in Ejigbo LGA of Oyo State in the west, Lejja in the east at Nsukka Local Government Area of Enugu state, Igbo Ukwu in Anambra state dated to the 9<sup>th</sup> AD among others (Aremu, 2008: 173-204). Awka (Oka) a south eastern city in Anambra state, Nigeria, is also an ancient iron smelting site with lots of blacksmithing industries. Neaher, (1979) asserts that the activities of Igbo metal smiths caught the eye of foreign observers of southeastern Nigerian cultures well over hundred years ago Basden (1938) remarked that “there are some towns which practically monopolize certain specialized professions. For instance Awka and other towns manufacture nearly all the metal works used in Igbo country.....”

Aremu, (2008) reports that after mining, the spongy mass of metallic iron known as the bloom is often sold to blacksmiths with which they fabricate several objects ranging from farm implements, hunting and fishing materials, palm wine tapping tools, weaving implements, household utensils, wood carving tools, ceremonial staff, military weapons, political royal swords, seats and scepter among others. This implies that the blacksmithing industry permeated most sectors of the society and as such its relevance and significance to pre-colonial Africans was not in doubt. It is also evident that this local industry created an avenue for employment and entrepreneurship beginning from the miners, to blacksmiths, distributors and even to users of products from the blacksmithing industry. Neaher (1979:354) reports of a variegated population of specialists metal smiths (uzu) inhabiting Awka town such as Ezi-awka, Amaikwo, Agulu- the last was widely known for its travelling smiths both within the Igbo region and beyond.

However, the status of this traditional blacksmithing industry is best described as been ‘endangered’ as it is currently facing lots of challenges with the increasing discovery of new technologies. Its continuity in the next few decades is doubtful. This is associated with some overwhelming factors necessitated by socio-cultural change and other current realities that may not be easily ignored in the 21<sup>st</sup> century. DiMaggio, Hargittai, Neuman and Robinson (2001) observed that the new technology’s impact on society is creating new forms of identity and inequality, submerging powers into in decentered flows, and establishing new forms of social organizations. To understand the influence of new technology on society, diverse theoretical traditions in sociology suggest a range of empirical questions. For instance, from the Marxian and Weberian traditions comes concern about power and inequality in the access to new technology. The Durkheimian perspectives brings to fore its impact on community and social capital. However, it is important to state that the nature of impact varies depending upon how economic actors, government regulations and users collectively organize new technologies.

### **Ancient and Contemporary Blacksmithing Technology in Awka**

Technology development entails a process of mobilizing resources, socio-cultural and harmonious integration of modern and traditional technologies organized and fitted into feasible

projects designed for a specific purpose. Several studies have been done on the traditional skills of the pre-colonial Nigerian (Obayemi, 1980; Olaoye, 1990) with evidence regarding the contribution of indigenous skills and techniques, particularly to the development and growth of various Nigerian communities before colonialism. Nevertheless, these developments in iron works and craft were stultified with the advent of colonial government and the introduction of a capitalist economy which led to the monetization of the Nigeria economy arising from changes in the normal and traditional way of life of the people. These developments, however, hindered the modernization of the indigenous technology in iron and crafts in the sub-region as a whole and Nigeria in particular (Onipede, 2010). As Ebuh (1998) has observed, technology can be acquired in any or all of three major ways; through self development efforts; by copying or stealing; through transfers. The ancient blacksmithing indigenous technology of the Awka people in south eastern Nigeria, in pre-colonial times, was self developed and substantially met the metal works' needs of the Igbo speaking area around them, ensuring continuous manufacture and supply of products, such as simple farm implements including hoes and cutlasses (Obadan and Oaikhenan, 2006). Better still, Njoku (1991) provides a rare and insightful written account of typical products and work environment of the ancient Igbo smithy as follows;

*These products included utilitarian articles such as matchets, axes, traps, guns, door staples, hinges and needles. Others were non-utilitarian items designed for ritual/religious, ornamental and title-taking purposes. These included gongs, spears, bangles, pendants, leg coils and pectorals... the hammer and the anvil were perhaps the most important of the smith's tools from both the mechanical and ritual points of view. Both were made entirely of solid iron, the hammer weighing between seven and ten pounds. The anvil was shaped in the form of a nail. Its tapered end was stuck into a solid block of wood about eighteen inches long, a portion of which was buried in the ground. To the untutored eye, the smithy was a jumble of confusion with the smith's work tools, unserviceable junk and several other items at various stages of production, all squeezed into the small enclosure. But to the practiced eye of the smith, everything was in order, and he had no problem picking his way through the seeming disarray (Njoku, 1991:207)*

On her part Neaher (1979), in her detailed study of the itinerant nature of the Awka entrepreneurial blacksmiths provides a revealing description of the typical smithy as follows;

*Awka's reputation was grounded in the modest contribution of a workshop consisting of kindred workers-a master smith (uzu) and two or three apprentices (nwaduzu, plural). The forge included furnaces, bins of charcoal, one or two iron anvils, a double bag bellows and various hammers and other implements, all housed in a simple shed (Neaher, 1979).*

Discernable from the above accounts are the rudimentary technological requirements to operate a local smithy in Awka. However, current studies, (Oke, 2007) indicate that Nigerian blacksmiths have moved beyond the production of simple traditional implements to modern domestic products such as kitchen wares, cooking utensils, basins and pails which are used in various homes. While others have ventured into the production of industrial products such as hammer head, key, chisel punch, bolt and nuts etc, as well as forge products which are in demand by those in the construction industry (Raw Materials Research and Development Council, RMRDC, 2000). Oke (2005) also emphasizes the importance of blacksmith shop in the production of forge parts of automobile spare parts if the shop is mechanized and appropriate material is provided. Following a survey carried out among black smiths in seven states in Nigeria, Oke (2007), redesigned three key technologies used in the blacksmithing process, namely; the closed furnace, the forging machine and the heat treatment bath. Basically these new technologies serve specific purposes as seen below;

**Closed Furnace** – This particular technology is designed to solve the problem of inappropriate heating associated with older technologies like the open furnace as well as reduce the time for heating a work piece and minimize fuel wastage, consequently improving the quality and quantity of the product.

**Heat Treatment bath** – Contrary to the primitive heat treatment process, which is achieved by quenching the forged metal in a container containing palm oil, water or some vegetable oil solution, this new heat treatment technology is designed to allow proper hardening of products with less distortion and internal stress, here the overall objective is to stabilize the property of the products to avoid unnecessary cracking of the product as a result of high distortion which normally lead to failure of the products during operation.

**Forging Machine** - Unlike the traditional mode of forging used by most Nigerian blacksmiths, this new technology helps in forging the product within the stipulated time and forging temperature thereby preventing deformation of the products.

While ancient blacksmiths in Awka may have been suited to meeting with the market demands of their time using blacksmithing technology at their disposal, the same cannot be said of modern blacksmiths who, in the face of geometric population explosion and increased market demand for their services also have to ensure that they manufacture products which compete favorably with foreign iron/metal products that have flooded the local markets since the advent of colonialism over a century ago. The entry below sheds more light on the problem.

### **Challenges of the Blacksmithing Industry in Awka**

In a study on the origins, characteristics, and significance of the traditional art of blacksmithing in southeastern Nigeria with Awka as focus, Nworjih (1993) identified various factors responsible for

the declining conditions of the traditional art of blacksmithing in Southeastern Nigeria. Some of them include: the modern technological advancement accompanied by the influx of foreign products; mass movement of rural community members to big cities; lack of government support, and the declining interest of youths in the profession. He, however, notes that products of the local blacksmithing industry remain indispensable to the people due to their socio-cultural, religious, economic and aesthetic significance to the living tradition of the society and their cultural heritage.

Perhaps, the singular greatest threat portending the extinction of the blacksmithing industry in Awka is the ebbing away of the apprenticeship system as the blacksmithing profession has lost its attraction in the eyes of the present generation of youths. A trip around Awka reveals this generational gap as most smiths fall into the older generation. While noting the socio-cultural and socio-economic necessity of preserving this ancient art among the people of Awka, it is important to recognize that economic viability and decreased social status may not be the only factors that are responsible for the waning interest of youth entrepreneurs in the profession, Njoku (2002) sheds more light on how laborious the local process of blacksmithing is;

*Traditional smithing was a very strenuous job, requiring considerable expenditure of physical energy, it also called for imagination, technical and artistic virtuosity, and steadiness of the nerves. The continuous striking of hot iron with a hammer weighing between seven and eight pounds was by no means a light job. Nor did the hammering involve merely striking iron on the anvil. As Valcar Jaros an American professional smith states, "hammer is a dynamic tool; it is important how it behaves when moving. When it is being struck it must be able to keep to the required path without turning, twisting and trembling". Such dexterity could only be acquired through many years of apprenticeship and on-the-job experience. (Njoku, 2002:33).*

It is, therefore, conceivable that, beyond status and material considerations, the death knell may have sounded for the indigenous blacksmithing process in Awka because of the perceived labor strain associated with the traditional smithing process by youth entrepreneurs who rather than go through the tortuous years of the traditional apprenticeship process would rather be engaged in an income activity requiring less stress and guaranteeing speedy wealth, whether or not this is socially sanctioned

Following the degeneration of the security situation in Nigeria in recent times, local blacksmiths also have to contend, with being viewed as suspect by the law enforcement agents in the country. The following report on the proliferation of small arms and light weapons (SALW) by Ngboawaji (2011) sheds more light;

*Guns have also been produced locally by illegal craft gunsmiths but there is hardly any information on the type, quality and scale of craft production. Sporadic raids against craft producers and seizures of guns produced by them often appear in Nigerian newspapers underlining the threat posed by illegal gun production. In June 2007, Nigeria's This Day newspaper reported the confiscation of 40 pistols from a local blacksmith in Niger State by the police while investigating a case of armed robbery. One of the arrested armed robbers had confessed having bought his gun from the craftsman. With this kind of businesses operating, it is thus difficult to ascertain the real number of arms circulating and how their proliferation and use could be curbed.*

Currently, in Awka and many parts of Igbo land it is still common to hear the members of the public or law enforcements agents refer to the use of 'Awka-gun' in the perpetuation of one local armed robbery incident or the other.

### **Implication for Entrepreneurship Development**

The term entrepreneurship has been described by Ugiagbe and Umunna (2002) as the process of bringing together creative and innovative ideas and coping with the management and organizational skills in order to combine people, money, and resources to meet an identified need, and thereby create wealth. This may be undertaken by one person or a group of persons. Fenemigho (2008) stated that creativity and management strengths are provided by entrepreneurial skills which combine strengths, skills and competence to produce goods or services. Steinhof and Burgess in Offorma (2005:14) also described an entrepreneur as a person who organizes, manages, and assumes the risk of a business or enterprise. In addition, he or she recognizes a money-making opportunity and sets up a business to exploit it. That was why Anyakoha (2001:263) indicated that entrepreneurship occurs when an individual develops a new venture, a new unique way of giving the market place a product or service. Again, Oyeniyi (2003) views an entrepreneur as one who undertakes to supply goods or services to the market for profit. Furthermore, Ezeudu (2008) summed entrepreneurship as the process of owning and managing a business enterprise with the hope of making profit. Bolarinwa (2001) indicated that entrepreneurship elements are combination of motivation, vision with judgment, communication, determination, optimism, courage, endurance and the power of creating cooperation which funds market opportunities. In line with the above, Ojukwu (2001) described entrepreneurship development as a programme of human capital development inputs aimed at increasing the supply of adequately trained entrepreneurs who are motivated to make a success out of business. In the case of Awka blacksmithing enterprise, the entrepreneurial spirit has waned seriously and needs urgent attention.

### **Theoretical Orientation: Skill as Discretion**

Braverman's deskilling of labour thesis remains a classical analysis of the nature of work and employment in capitalist societies. Indeed Braverman (1974) cited in Grint (1991) defined skill as the equivalent of 'craft mastery' implying that skill is comprised solely of technical components which can be objectively evaluated and observed. However, sociologically it is important to note that skill is socially constructed and therefore a contingent phenomenon. This paper, is therefore, premised on discretion approach to understanding skill. It is a way of assessing skill by examining it in relation to the discretion the employee can exercise and hence the amount of control over his or her work. The analytical model developed by Rolfe (1990) following her study of skill is instructive in this regard. Her model consists of six 'subcultural' measures. They are used as a framework to explore skill changes brought about by new technology for different occupational groups. Rolfe's analysis is qualitative in approach; she does not develop quantitative measures of skill but uses the model to help direct her analysis and interpretation. The model is presented thus;

### **Rolfe's Model of Skill**

<b>Technical complexity</b>	1. Complexity of Tasks
	2. Knowledge
	3. Range and variety of tasks
<b>Discretion</b>	4. Discretion-making and judgement over product/process
	5. Control over the organization of work
	6. Supervision

Source: Rolfe (1990: 107-121)

This model aptly surmises the case scenario of traditional blacksmiths in Awka, who appear to helplessly watch an age long cherished occupation of their ancestors, and indeed their 'social identity', wane away under a barrage of challenges confronting the traditionally revered occupation. Beyond suffering from the travails of colonialism and stiff market competition with foreign metal/iron products, an intergenerational gap appears to have being created. And so beyond coping with the demands of new blacksmithing technology, the younger generation of youth entrepreneurs who should have been apprenticed have been effectively 'deskilled' following the seemingly less attractive nature of the blacksmithing occupation in Awka. The losses that flow from the 'extinction threat' of this ancient occupation in Awka and elsewhere in Nigeria are manifold and cannot be overemphasized. But most of all, in the entrepreneurial realm, it then means that the reservoir entrepreneurial potentials, of would be youthful apprentice blacksmiths, may never be tapped by larger society.

### **Conclusion and Recommendation**

This paper concludes that the occupational challenges being faced by traditional blacksmiths in Awka, are multi-faceted and that the trend portends even greater danger in terms of 'intergenerational deskilling', where by the age old indigenous smithing technologies do not



metamorphose into better technologies but are rather lost completely along with the skill 'sacred' to the profession. The position of this paper is that conscious and deliberate effort must be made to revive and resuscitate this endangered occupation by all stakeholders involved.

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