

WOMEN ENTREPRENEURSHIP IN SCIENCE AND TECHNOLOGY: A TOOL FOR POVERTY ERADICATION IN NIGERIA

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Abstract

In order to enhance women entrepreneurship in Science and Technology, it is necessary not only to understand and indicate statistically how women's roles and situations differ from those of men; but to understand how women also may be differentially represented in Science & Technology (S&T) and affected by its implementation in the eradication of poverty. This paper made effort to examine Women Entrepreneurship in Science and Technology: A tool for poverty eradication with a view of making it a tool for female participation in national development worthwhile. Eradicating poverty depends on improving the situation of women and increasing the efficiency of their work. Reducing the gender gap in education reduces individual poverty and encourages economic growth. Factors militating against women scientists' entrepreneurship were also discussed. In order to overcome the challenges of women scientists' entrepreneurship, the paper offers recommendations with a view to enhancing female participation in poverty eradication in Nigeria by encouraging female education in Science and Technology.

Introduction

The role of women in national development cannot be over-emphasized. Also, the place of science and technology is central to national advancement. No doubt, a country's level of Scientific and Technological advancement dictates the life style and future of her citizenry. In addition, increased focus on formal and informal education, new technology, empowerment of women gender, and sustainable development will undoubtedly, bring the developing world closer to the developed world and reduce the huge economic gap (Naugah, 2003).

Education as defined by Okojie (2007), involves the socialization of individuals to become integral part of the society in which they live. The main focus of education in Nigeria since independence is to prepare the citizens for effective living and service to the community. The education we give to a child today must see him through all stages of his life (Fafunwa, 1974).

The role of Science in the advancement of human beings on issues relating to public health, water, infrastructure, energy, food, security and development is a prominent one. It stands to reason therefore that as the world's development becomes increasingly driven by Science and Technology, no country can afford to be passive. It therefore becomes imperative that women - a formidable group be fully integrated in the moving wheel of high technology. The focus of the society then should involve development that would take into consideration all segments of the population, women inclusive.

Woman as a person and also as an agent of development has as much right to Science and Technology as the man. Promoting women's role in Science and Technology with a view of empowering them and promoting entrepreneurial development for women scientists, engineers, and technologists becomes a big issue. The United Nations Industrial Development Organization (UNIDO), 2001, regional typology studies on the role of women in manufacturing have revealed empirical evidence that women's paid employment and, in particular, their participation in industrial department, improves their quality of life, literacy and life expectancy, while decreasing their fertility rate. Remunerative employment opportunities as well as entrepreneurship also enable women to fight poverty. (United Nations Industrial Development Organization (UNIDO), 2001).

Poverty has become a major socio-economic problem in present day Nigeria. A disturbing observation about poverty in Nigeria is that it is on the increase, both in incidence and intensity despite the wide variety of national and international measures undertaken to eradicate it during the last three decades. The failure of these measures have been attributed to a multiplicity of causes, of which the most frequently mentioned and emphasized include: inadequate conceptualizations of poverty and development; failure to identify the root causes of the problem; lack of adequate organizational requirement for effective program implementation, wrong prescriptions given as solution to the problem of poverty and various combination of these shortcomings.

The Concept of Entrepreneurship

Entrepreneurship is the practice of starting new organizations, particularly new businesses. Entrepreneurship is often a difficult undertaking, as a majority of new businesses fail. Entrepreneurial activities are substantially different depending on the type of organization that is being started.

Di-Mass (2002) listed the following as characteristics of the entrepreneurs:

- a) Self-confident and multi-skilled. The person who can 'make the product, market it, and count the money, but above all they have the confidence that lets them move comfortably through uncharted water.
- b) Confident in the face of difficulties and discouraging circumstances.
- c) Result-oriented. To be successful requires the drive that only comes from setting goals and targets and getting pleasure from achieving them.
- d) Innovative skills. Not an "inventor" in the traditional sense but one who is able to carve out a new niche in the market place, often invisible to others.
- e) Total commitment. Hard work, energy, and single-mindedness are essential elements in the entrepreneurial profile.
- f) A risk-taker. To succeed means taking measured risks.

Women Entrepreneurship in Science and Technology

Women entrepreneurship is a contemporary issue of international concern. This is borne out of the fact that women empowerment is central to human development and national advancement. Ensuring or enhancing women empowerment is the business of everybody in the society. Empowerment of women entails a process of building their resource capability and skills for leadership-rights and meaningful participation in all spheres of the society (Erinosho, 2005).

The focus of the paper centers on Women Entrepreneurship in Science and Technology: A tool for poverty eradication with a view of making it a tool for female participation in national development worthwhile. This is borne out of the fact that females could better be encouraged right from the primary through their secondary school education so that proper monitoring, mentoring, and mainstreaming could be done with a resultant effect of more females being involved in women entrepreneurship in Science and Technology.

Definition of the Term Poverty

Poverty denotes a universally undesirable human condition. It describes varying kinds and degrees of human deprivation in society. Poverty is a complex problem because there are many human problem to be found in the inter-disciplinary literature on the subject, each stressing a given kind or degree of deprivation. However, the concept of poverty does not lend itself to any precise definition. There is currently no single index of poverty that is universally accepted. While some talk of poverty in quantitative terms, that is, in terms of calorie intake per day or in terms of a given level of income, others discuss it in qualitative terms, that is the inability of certain people in society to attain a given economic, cultural, social or other levels. (Onuoha, 1995).

Defining poverty in terms of income in a society like Nigeria is grossly inadequate since the economy is not completely monetized. Similarly, there is a problem of assessing to ascertain the calorie intake need of the poor when compared to the rich, hence, the qualitative definition of poverty also lacks precision (Abiodun, 1998). Some scholars have discussed poverty in absolute and others in

~~Women Entrepreneurship (1987) Causes And Techniques of Poor Poverty Eradication in Nigeria~~ extreme and most obvious forms. It refers to a lack or deficient supply of the basic necessities of human life such as food, safe drinking waters, housing, clothing and health care. A person is said to be in absolute poverty if he or his family cannot supply these basic needs for him.

The poor in Nigeria have been excluded not only from the corridors of power, decision making and distribution of the wealth of the nation, but from participating and shaping the political and economic future of their country (Onuoha, 1995). In the political sphere the poor are considered as object, rather than subject of politics. Their opinions and suggestions are never sought on crucial issues of who gets what, how and when. They never participate in the formation of the political parties, (Constitution Drafting Committees, Federal Executive Councils and the Nigerian Constitutional Conference, Nnoli, 1984).

Causes of Poverty

In other words, the root cause of the Nigerian economic crisis could be traced to the lopsided approach of the past colonial developmental path which the elite in power had followed. The foundations of this path to development began in 1945's when the state under colonial rule sought and had close agreement with foreign capital to promote import substitution industrialization using peasant surplus to finance the importation of the inputs necessary for growth and expansion of manufacturing activities. This model was carried over into the post-colonial period. Up to the end of 1960's agricultural surplus accruing primarily from peasant cash crop production continued to provide the foreign exchange for sustaining manufacturing activities (Peterson, 1982).

However, as the post-colonial import-substitution industrialization process developed, it became clear that its sustainability depended on the ability of the state to earn sufficient foreign exchange to meet its needs, namely, raw materials, spare parts and machinery. These needs grew as the manufacturing sector expanded at the expense of the agricultural sector. The strong dependence of the Nigeria import-substitution industrial sector on external inputs had serious repercussion for the Nigerian economy. Consequently, the collapse of the world oil market prices which resulted in drastic fall in Nigeria's oil earnings, triggered a major crisis in industries and the rest of the Nigerian economy (Ekpenyong, 1992).

Factors Militating Against Women Scientists' Entrepreneurship

These factors are discussed in this paper as they relate to societal norms, funding, lack of information, low skill acquisition, lack of mentors, lack of supporting networks, and low level of encouragement from spouses and families. These factors include:

- a) **Finance:** Poor finances and lack of adequate funds for starting enterprises are serious problems to women entrepreneurs. Women generally are poor for lack of funds and as such, do not have enough financial backing to start a good business or sustain an existing one.
- b) **Lack/Poor Technological Know-How:** Low educational status of most women does not allow them to have the opportunity of being technologically sound. Many technical skills that could hitherto have assisted to ensure successful enterprise and appropriate production techniques and product diversification are not possessed by many women.
- c) **Lack/Poor Access to Market Information:** Usually, most of Nigerian women are not educated. The literacy level is still at the low rate in the country. As such, much of the market information that could have been beneficial and also enhance better productivity elude women. Most are ignorant of market trends concerning costing, pricing, etc. and consequently, could not benefit maximally from readings of price movements and fluctuations.
- d) **Socio-cultural factor:** A major point to note here is the fact that in Nigeria, many women during the socialization process, were not given enough opportunity, freedom, and wherewithal to develop adequate and appropriate skills that can enable them to have entrepreneurial competency. This is essentially inherent in the much created gender-related limitations which have the tendency to relegate women to the background.

- e) **Fear of Losing out:** In Nigeria, women are largely responsible for household keeps such as food, water, clothing, and often times, their children's education. As such, they are usually afraid to invest their hard earned and much needed income into businesses or enterprises for fear of failure.
- f) **Poor Networking/Linkage:** Women are not properly connected. Many as noted earlier are poor, uneducated, and unconnected. As such, good networking or linkage for support services even when available may be beyond the reach of women.
- g) **Unfavourable Conditions/Policies:** It is obvious that many of the conditions for obtaining loans do not necessarily favour women. The conditions are usually stricter for women than for men. Even when policies are formulated to disabuse these gender differences, the effect in practice is yet to be noticed.
- h) **Lack of Mentors:** It is pertinent to note that women have not gotten many mentors that they could look up to in the area of entrepreneurship. As such, they have constraints venturing into areas that they do not know familiar females that have succeeded along that line.
- i) **Lack/Low Level of Encouragement from Spouses:** Men generally enjoy being the breadwinner of the household. Most of the time they would not want their wives to be economically buoyant and independent.

Conclusion

In this paper, an attempt has been made to highlight the need for women entrepreneurs in Science and Technology in Nigeria. It has been documented that if women are not marginalized and as such, are actively involved in the mainstream of the national economy, it is likely that the economy becomes more stable and buoyant and consequently, reduce much witnessed current problems. However, the factors militating women entrepreneurship in Nigeria are discussed. These factors include socio-cultural factors, finance, lack/poor access to market information; lack/poor technological know-how, and poor networking/linkage. Others include fear of losing out, unfavorable conditions, lack of mentors, and lack/low level of encouragement from spouses.

Against this backdrop, this paper offers some suggestions for encouraging and promoting Women Scientists' entrepreneurship. These include socio-cultural prospects, female awareness campaign and sensitization workshops, improvement in the policy/legal framework, encouraging female education in Science and Technology, and provision of adequate funds. In addition, networking should be encouraged where in successful Women Scientists' entrepreneurs could share their experiences and counsel on problems.

Recommendations

In order to overcome the challenges of women scientists' entrepreneurship, the paper offers recommendations with a view to enhancing female participation in poverty eradication in Nigeria.

- (a) **Socio-cultural Prospects:** Males and females alike should be given the opportunity to acquire needed skills for entrepreneurial competency.
- (b) **Female Awareness Campaign and Sensitization Workshops/Seminars:** There is an urgent need for awareness and sensitization workshops to be organized by women organizations, associations, government gender agencies and units, Non-governmental agencies and allied organizations to educate the Women Scientists' entrepreneurs of the new opportunities/developments at hand that could enable them to overcome constraints and enhance the starting business/enterprise.
- (c) **Encouraging Female Education in Science and Technology:** More females should be encouraged to study Science and Technology in schools and colleges. With this, they could gain access to know-how, technologies, appropriate and adequate skills, training to upgrade their technical capabilities, and their entrepreneurial and business skills whether in artisan production or in high-tech industries.

- (d) **Improvement in the Policy/legal Frame-work:** The existing policies and legal framework should be improved upon in a manner that would practically reach a satisfactory level so as to encourage the female entrepreneurs.
- (e) **Encouraging Women Scientists' Networking:** Women Scientists have to be encouraged to be appropriately connected. Networking is vital to women's ability to access information, ~~technology, markets, and raw materials relevant for the development, sustainability, or expansion of their businesses.~~ Women in technology, markets, and raw materials relevant for the development, sustainability, or expansion of their businesses. As such, women networking nationally and internationally should be adequately facilitated.
- (f) **Fund/Finance:** The Federal Government of Nigeria should provide adequate funds in form of soft loans for prospective Women Scientists' entrepreneurs to start up business/enterprises and or progress in their business.
- (g) Successful Women Scientists' entrepreneurs should be encouraged to share their experiences and counsel on problems with the up-coming women scientists.

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