

Evaluation of ICT use Among Women Entrepreneurs in the Nigerian Garment Industry

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Abstract

This study evaluated the use of ICT (Information and Communications Technology) among women entrepreneurs in the garment industry in South-Western Nigeria. The objectives were to unravel the extent of ICT literacy among women garment producers, to evaluate the use of ICT in garment design and production, and to evaluate the use of ICT in garment marketing. A total of 149 women entrepreneurs participated in the study and data were analyzed using descriptive statistics. It was discovered that women garment entrepreneurs lacked basic computer skills and they also lacked the exposure to make use of ICT infrastructure to conduct their numerous activities in the garment industry in order to enhance business development. It was further discovered that the most widely used ICT technology were information based infrastructures such as mobile phones, while computer related infrastructures were rarely used. The use of newspaper and magazines for sourcing designs was also discovered in the study; however, emphasis on marketing and advertisement using electronic channels such as radios and televisions were underutilized. It was concluded that women entrepreneurs' use of ICT infrastructure and systems in South-Western Nigeria is limited and even the ones in use are not widely explored and channeled for business development.

Keywords

ICT, Women Entrepreneurship, Garment Industry

I. Introduction

Women's entrepreneurship in developing countries has been hindered by the continued use of primitive technologies which usually affects the output from their ventures. This hindrance is due to lack of or inability to access new dynamics in the world of technology to improve the growth of entrepreneurship. Part of the new dynamics is the emergence and growth of information and communications technology. From studies carried out on the growth of women's businesses, it has been observed that the use of ICT has been relevant to growth in subcontracting agreements in the production of garments [1]. As the developed economies outsource and subcontract their production processes, new opportunities emerge because enterprises are created [2]. Women being part of the vulnerable group in Third world countries are excluded from the global trends, especially exposure to ICT infrastructure and systems [2].

In Nigeria, women entrepreneurs are an integral part of economic growth. Their business activities are required both for wealth creation for families and the entire nation's economy [3-4]. Women's activities in entrepreneurship enable them to effectively combine their productive and reproductive roles because of the flexibility in hours of work which permit them to care for their children and also contribute substantially to economic growth [3]. This has made women to be regarded as a central focus of economic development and public policy concerns [5].

As women entrepreneurship is undergoing a transformation process, the focus on Nigeria, specifically the garment industry is the focus of this work since their level of ICT usage is still

left undetermined. Thus, the crux of this work is to discern the exposure and extent of application of ICT to the design, production and distribution processes in the garment industry, focusing specifically on women entrepreneurs in Ibadan local government area of Oyo State, Nigeria.

II. Statement of the Research Problem

The focus on women entrepreneurship has been in vogue since the twentieth century in Africa. This is due to the fact that women are subjects in the issue of poverty [6]. Hence, in the bid to ensure sustainability and empowerment, different enterprises were ventured into and created as a means of income. Most of the ventures established by women can be categorized under the Small and Medium Scale Enterprise (SME) according to Beverly and Atsese [7]. Even though Third World economies mostly engage in the SMEs, there is a systemic problem of the adaptation of more advanced technology to suit businesses [7]. The implications of this are: low patronage, low profitability, inability to diversify into other businesses, and lack of continuity in the business entity. According to Tonetti [1], only a small portion of the women business owners in developing countries are digitally empowered. This means that the proportion of women ICT literacy, exposure and application is low. Moreover in Nigeria, less revealing studies have been carried out on the involvement of women entrepreneurs in ICT. It is against this background, that this study is undertaken.

III. Objectives of the Study

This study is expected to:

1. Unravel the extent of ICT literacy among women garment producers;
2. Evaluate the use of ICT in garment production and design; and
3. Evaluate the use of ICT in garment marketing.

IV. Review of Literature

A. Theoretical Framework

The Entrepreneurial Cognition Theory [8], suggests that entrepreneurial ventures are driven by individuals and it is the individuals who will demand to use technological tools to develop their activities. Based on this theory, the adoption of ICT allows entrepreneurs to connect and interact with other important actors in improving businesses. Furthermore, ICT use in business is a potent domain for entrepreneurial endeavour [9]. Hence, the use of ICT by entrepreneurs has led to e-commerce innovation [10]. Since, the focus of this work is to evaluate ICT use among women entrepreneurs in Nigeria with emphasis on an urban local government, the Entrepreneurship Cognition Theory in the adoption ICT in business is considered relevant.

According to Krueger [11-12], the Entrepreneurship Cognition Theory inculcates in the individual, the psychology of perceiving opportunities to explore. For instance, entrepreneurs appear to identify opportunities based on cues or signals from the environment that they filter and process through a number of mechanisms. The ICT revolution in business development can therefore be

described as a product of cognitive processes emanating from entrepreneurial activities.

B. Empirical Review of Literature

ICT adoption in business has been put under theoretical scrutiny by previous scholars who have examined their determinants with regard to cultural differences [13-14]. Other scholarly inquiry into the use of ICT in business focused on the difference between rich and poor countries regarding access to technologies available to their inhabitants [15]. ICT adoptions from the point of view of entrepreneurship scholars were concerned with individualistic approaches. It was argued that individual entrepreneurs are visionaries, providing the idea for business operations and it is believed that they have a better way of allocating resources [16].

Papastathopoulos and Beneki [17], focused on the types of SMEs that benefited from the adoption of ICTs in the Greek SME sector. The study found out how some SMEs reaped more benefits than others from the adoption of ICTs and which factors determined the successful usage of ICTs. The results of the study revealed that strategy played a major role in the adoption and appropriate use of ICT by specific SMEs. It also concluded that prior entrepreneurial knowledge and experience of ICT facilities determined the extent of ICT usage among entrepreneurs.

Alam, Jani and Omar [18], carried out a study on the success factors of Women Entrepreneurs in Southern Region in Malaysia. It was discovered that innovation through ICT has no direct effect on the success of women entrepreneurs in Malaysia. However, the study maintained that the nexus between ICT and women's entrepreneurship can be conducted in other cultures and nationalities. It is based on their conclusion that this study was carried out.

Aleke, Ojiako, Wainwright [19], carried out studies on the diffusion of e-commerce technology to small scale Agribusiness in Nigeria. The empirical evidence suggests that ICTs and other related technologies are increasingly emerging in the communities of the developing economics such as Nigeria. It was discovered that rural actors engaged in agricultural industries felt that the implementation of ICTs could influence the development of new business processes and the way existing processes are organized. The research motivated the South East State Government in collaboration with the Federal Government to give closer attention to their process of making Nigeria an ICT-enabled country.

V. Research Methodology

This study was conducted in Ibadan North Local government area of Oyo State, South-Western Nigeria. The focus group within the area of study is women entrepreneurs in the garment industry. Ibadan North local government harbours the core urban areas in the city of Ibadan.

The data pertinent to this study were collected from the women involved in garment production. The target population (which is made up of 149 women entrepreneurs) is characterized by variability on the attributes of age, educational qualification, marital status, exposure, etc. This variability is expected to influence their exposure to the use of ICT. A total of 149 respondents participated in the study, which represents 100.0% of the entire population. Purposive method of sampling was adopted to capture the target population. Women garment producers from the areas such as Agbowo, Bodija, Mokola and Sango were contacted. These women operated on sole proprietorships with their location in shopping centres and central markets. From the operations of

the union, every garment producer is expected to attend meetings every week; thus the population was targeted purposefully for the research.

VI. Measurement of Variables

The dependent variable is women entrepreneurs and they are examined based on their levels of education, union affiliation, years of experience and age-group. The independent variable is ICT facilities which are measured using mobile phones, radio and TV adverts, availability and access to the Internet. These variables are measured on a well-structure questionnaire, which is the research instrument use for the study.

The questionnaire was administered in each zone during the union meeting of women garment entrepreneurs. Three field assistants were used to implement the process. The questionnaires were administered within a period of one month during the meetings of the entrepreneurs.

VII. Data Analysis Technique

Data Analysis was carried out using descriptive statistics of frequency counts and simple percentages. The responses were analyzed in tabular form.

VIII. Presentation and Interpretation of Data

The data presented here are the results of the field research conducted.

Majority of the respondents are within the age range of 21 and 40 years as shown in Table 1. The age group 21-30 has the highest number of respondents, 50 (33.6%) followed by 31-40 with number of respondents as 46 (31.0%). The respondents within the age group 41-50 are 25 (15.8%) while the other groups are considerably low. This implies that the active working population of women garment producers are between 21-40 years of population of those in the range of 51 and above are low probably because they have long years of experience with less flairs for garments production in contemporary times.

Table 1: Statistics of Respondents' Age Group

Age Group	Frequency (n = 149)	Percentage (%)
Below 20 years	8	5.4
21-30 years	50	33.6
31-40 years	46	31.0
41-50 years	25	16.8
51-60 years	15	10.1
Above 60 years	5	3.1

The respondents with years of experience ranging from 6-15 years are in the majority with a total of 66 (44.2%) as depicted in Table 2. The years of experience under the category of 16-30 years and below 5 years are also high. This confirms the presentation in Table 1, showing that the active working population is made up of younger individuals within the age bracket of 21-40 years.

Table 2: Respondents' Years of Experience

Variable	Frequency (n = 149)	Percentage (%)
Below 5 years	30	20.0
6-15 years	66	44.2
16-30 years	42	27.4
Above 30 years	13	8.4

Most of the respondents are secondary school leavers with a total of 79 (5.3%), as shown on Table 3. A considerable number of respondents possess higher education, while 4 (2.6%) had a professional training in a garment production (outside Nigeria). By implication, the majority of respondents have basic literacy education (Table 3).

Table 3: Respondents' Educational Qualification

Variable	Frequency (n = 149)	Percentage (%)
Primary School Certificate	19	12.8
Secondary School Certificate	79	53.0
NCE/OND	28	18.8
HND/BSc.	19	12.8
Others	4	2.6

97 (65.1%) of the respondents were of the view that they do not need a computer for their business and this might be due to lack of exposure and ignorance about trends that could facilitate production process (Table 4). This further confirms the responses to respondents' ownership of e-mail address and accessibility to Internet connection which are considerably low, 36 (24.2%) and 26 (17.5%) respectively. Of all these respondents, none of them possess a website for their business (Table 4).

Table 4: Respondents' Use and Accessibility to Computer and Computer Related Activities

Variation	Yes	Percentage (%)	No	Percentage (%)
Computer system needed for business	52	34.9	97	65.1
Have of an e-mail address	36	24.2	113	75.8
Accessibility to Internet connectivity	26	17.5	123	82.5
Possession of a website for business enterprise	0	0	149	100

Most of the respondents perceived the importance of computer and other related facilities as necessary in the process of garment production. Although their responses were based on a general view and conception, they lacked the understanding of computer specifics and its application to garment production as depicted in Table 5.

Table 5: Respondents' Perception of the Use of Computer and Other Related Facilities in the Process of Garment Production

Variation	Yes	Percentage (%)	No	Percentage (%)
The use of computer and other related facilities can improve the production of garments on a large scale	117	78.8	32	21.5

In line with the previous responses, only 2 (1.3%) of the respondents use computer aided sewing machines (Table 6). This shows that majority of the women do not use it and most likely don't know the value of using it.

Table 6: Respondents' Use of Computer Aided Sewing Machines

Variation	Yes	Percentage (%)	No	Percentage (%)
Usage of computer aided sewing machines	2	1.3	147	98.7

The use of mobile phones depends on the number of subscribers, and it is discovered on Table 7 that all the respondents are in possession of a mobile phone, i.e. 149 (100%). Landline phone calls are occasionally or not always in use, 68 (54.4%). SMS is also widely used, 90 (60.4%). Furthermore, websites are not in use at all, only one respondent subscribe to its use occasionally. 93 (62.4%) subscribed to the use of magazine and newspapers always, which is very considerable. By implication, the use of mobile phones, SMS and magazines are mostly used in business information and communication, while websites, e-mail, the Internet, and bluetooth devices are not always in use as most of the entrepreneurs lack knowledge in their usage (Table 7).

Table 7: Respondents Usage of ICT Infrastructure in Business Information and Communication

Variable	Frequency (Always)	%	Frequency (Occasionally)	%	Frequency (Not at all)	%
Mobile phone calls	149	100	0	0	0	0
Landline Phone calls	28	18.8	53	35.6	68	54.2
Text Message / SMS	90	60.4	28	18.8	31	20
Bluetooth device	15	10.1	27	18.1	107	71
Internet	9	6.0	29	19.5	111	74
Electronic Mail	9	6.0	29	19.5	111	74
Website	0	0	1	0.7	148	99
Magazine and Newspapers	93	62.4	22	14.8	34	22

By direct contact with customers and social networking in gatherings and occasions, all the respondents get job offers which ranked 1st (Table 8). 132 of the respondents get jobs by phone calls which is ICT related. This further affirms the findings in Table 7 which shows that mobile phone calls are widely in use. The use

of magazine and newspaper adverts is not widely explored. This is due to the fact that there is a conventional practice of direct contact with customers.

Table 8: Statistics on Respondents Means of Getting Jobs for Production of Garment

Variations	Frequency	Ranking
Through direct contact with customers	149	1 st
Through social networks in churches, parties, meetings etc.	149	1 st
Through order made on your website	0	4 th
Through phone calls	132	2 nd
Through magazine and newspaper adverts	2	3 rd

All the respondents use freehand drawing on paper to create designs (Table 9). This implies that part of the skills acquired by respondents in the garments industry is the art of drawing. However, 10 of the respondents explore the use of computer graphics, which if used, will make the art of drawing easier. 23 respondents do paper cutting while others of 12 use objects in creating models.

Table 9: Means of Creating Designs

Variations	Frequency	Ranking
Through Computer Graphics	10	4 th
Free hand drawing	149	1 st
Paper cutting	23	2 nd
Use of objects	12	3 rd

All the respondents use personal ideas and innovations, which is very typical of the work as shown on Table 10. Local and international magazines are also sources of information and design ideas. However, most of the respondents do not attend fashion shows as 33 respondents only subscribed to its use; fashion posters are also widely in use. 7 respondents subscribed to the use of musical videos and popular trends as sources of information.

Table 10: Information and Idea of Designs Produced

Variations	Frequency	Ranking
Through personal idea and innovation	149	1 st
Through local and international magazines	120	2 nd
Through fashion shows	33	3 rd
Through fashion posters	149	1 st
Musical videos	7	4 th

The conventional practice of public display in front of owner's shop and social gatherings are totally subscribed to by all the respondents as the way by which they market and advertise (Table 12). Radio and television adverts, as well as magazines and newspapers are not usually explored for advertisement; respondents claimed that

they were always very expensive. Websites are totally not in use for marketing and advertisement as shown on Table 12.

Table 12: Ways by which Respondents Market and Advertise

Variations	Frequency	Ranking
Through SMS	26	4 th
Through radio and television adverts	15	5 th
Through E-mail	10	6 th
Public display in front of the shop	149	1 st
Through your website	0	8 th
Through handbills	31	2 nd
Through adverts in magazines and newspapers	5	7 th
Exhibition at fashion events	27	3 rd
Through events social gathering in schools, churches etc.	149	1 st

From Table 13, it is discovered that majority of the women do not have the skills of operating computers. This is because 66.4% do not have a computer set and 58.4% do not know how to operate computer. This implies that computer literacy level among women garment producers is low.

Table 13: Extent of ICT Literacy among Women Garment Producers

Variation	Yes	Percentage (%)	No	Percentage (%)
Do you have a computer set?	50	33.6	99	66.4
Do you know how to use a computer?	52	41.6	87	58.4

All the respondents apply personal wisdom and creative ideas in the designing their garments (Table 14). However, only 6.7% of the respondents apply the use of computer graphics. This also corroborates the results on Table 13 which shows that a large number of respondents lack computer literacy. Furthermore, 86.6% of the respondents do not refer to local and international magazines while fashion posters are widely sought after.

Table 14: The Use of ICT in Garment Production and Design

Variation	Yes	Percentage (%)	No	Percentage (%)
Do you create designs by yourself?	149	100	0	0
Through computer graphics?	10	6.7	139	93.3
By going through local and international magazines?	20	13.4	129	86.6
By going through fashion posters?	149	100	0	0

Apart from the conventional use of public display and social gatherings, very few women entrepreneurs adopt ICT in garment marketing and advertising. The most sought for is the use of handbills and mobile phone Short Message Services (SMS), as shown on Table 15, which when compared to the total number of respondents, are very few. The use of website is not explored at all.

Table 15: The Use of ICT in Garment Marketing

Variations	Frequency	Ranking
Through SMS	26	2nd
Through radio and television adverts	15	3rd
Through E-mail	10	4th
Through website	0	6th
Through handbills	31	1st
Through adverts in magazines and newspapers	5	5th

IX. Summary of Findings

The problem identified in this study was that women entrepreneurs underutilize ICT infrastructure and systems in the production and marketing of garments. This problem could be explained as one of the factors that has affected growth and expansion in the garment industry. The use of newspaper and magazines for basic information is important for sourcing designs as discovered in this study, however its emphasis for marketing and advertisement is underutilized. Radio and television adverts are also underutilized due to the fact that it is expensive to explore and some women may even lack the entrepreneurial drive to explore the opportunities therein. The findings in the study also showed that most of the women producers in the garment industry lack computer literacy. This is a basic factor that is germane to the application of advanced procedures in garment production. Thus, the use of mobile phone phones for business information and communication and the use of magazine, posters, newspapers for information are the most sought after. As a result of this, it is write to sum up that Nigerian women entrepreneurs' use of ICT infrastructure and systems is limited and even the ones in use are not widely explored and channeled for business development.

X. Conclusion

Based on Bull and Willard [20] analysis on the influence of the social and cultural processes and beliefs in entrepreneurship, it is discovered that the environment is vital to the level of ICT use among women entrepreneurs. However, Nigerian women have limited exposure because they make use of cheap technologies which the environment offers. From Baron's [8], explanation of entrepreneurial cognition theory, the fact that entrepreneurial ventures are driven by individuals means that it is the individual that will demand for relevant technologies to enhance their entrepreneurial skills and this is an important factor in ICT use in the Nigerian garment industry.

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