

Full Length Research Paper

Gender and entrepreneurial activities of secondary school administrators in southern Nigeria

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The study investigated gender differences in entrepreneurial activities of secondary school administrators in public schools of Southern Nigeria. A descriptive survey design was used in this study. The study sample was 369 (213 males and 156 females) administrators of secondary schools (principals), which was 40% of the population of 1339 administrators, using the multi-stage random sampling technique. A 20-item researchers-designed instrument, "involvement of secondary school administrators" in entrepreneurial activities questionnaire (ISSAEAQ) with Cronbach alpha reliability coefficient of 0.78, was used for data collection. The four research questions which guided the study were analyzed through frequency counts, mean scores and percentage counts and the two hypotheses analyzed by t-test and multiple regression analysis. The findings indicated low entrepreneurial activities among the sample, of which agriculture, trading and material supplies are the most favoured entrepreneurial activities. The females engage in more but non-statistically significant entrepreneurial activities than the males. It was concluded that secondary school administrators both male and female in southern Nigeria need to be more involved in entrepreneurial activities. Among the recommendations was that government being the proprietor of public schools should enlighten and practically support school administrators in entrepreneurial activities, as a way of reaching the students for sustainable economic future in Nigeria.

Key words: Entrepreneurial activities, secondary schools, administrator, southern Nigeria.

INTRODUCTION

Several models have been put forward to explain the causes of the differences between the males and the females. The biological model takes the reproductive cycle approach. It gives biological explanations to certain commonalities in women's behaviours. For instance, excessive mood changes in the females are linked to hormonal changes due to menarche, post-partum and menopause. In other words, changes in the level of female reproductive hormones provide explanations for women's vulnerability to psychological problems (Nottleman et al., 1990). These problems are said to influence the managerial skills of the females.

The social model traces differences between the males and the females to the socialization process and stereo-

types. Sex stereotypes practiced by care-givers are said to cause gender differences in males and females, including differences in their self-concepts, which influence how they manage their own affairs. The social model has adherents in studies like Westen (1996) and Ogundipe (2007). Westen (1996) holds that sex is a biological categorization based on genetic and anatomical differences; while gender is the psychological meaning of being male or female, which is influenced by learning/culture.

The society sets gender roles, that is, the society defines the specific range of behaviours which are considered appropriate for males and females. Odundipe (2007) maintains the same position by stating that gender is "a culturally-shaped group of attributes and behaviours given to the male or the female". It is the stated roles that society ascribes to men and women based on what is 'perceived' to be their sex in the society. Using hermaphrodites for an illustration, Ogundipe (2007)

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maintains that if an hermaphrodite is ascribed the role of a man, and adjudged as such, he would dress as a man and perform family and public roles of men regardless of the body structure. Based on this illustration, Ogundipe (2007) maintains that the definition of womanhood is not always biological or sexual. There are socio-economic points and levels where women cease to be seen as women, but they are ritually and officially designated as men. In the view of Ogundipe (2007), womanhood does not refer to the biological being but a construed entity. Being addressed as a woman and being addressed as a female are two different things. The former is societal and culturally-given for purposes of subjugation, while the latter is naturally-given. In the view of Odungipe (2007), "gender is not sex and sex is not gender".

As indicated by Rusch (2004), researchers avoid gender issues because some consumers of research may be so gender-sensitive that they may brand unsuspecting researches as being discriminatory. Therefore, this paper takes a neutral stance in controversies surrounding the conceptualization of the term 'gender'. As used in this paper, the word 'gender' is equivalent in meaning to the word 'sex'.

Entrepreneurship/Entrepreneurial skill development

The word 'entrepreneur' is a French word which means a go-between. In the middle ages, an entrepreneur was someone who organized musicals in Cathedrals to a successful end (Okenwa, 2005). The word, 'entrepreneur' found its way into economics, where entrepreneurship means the willingness to pursue investment opportunities and the willingness to successfully run an enterprise. Accordingly, an entrepreneur is somebody who has the ability to identify business opportunities where others would not notice. He has the ability to assemble the necessary resources to take advantage of such opportunities, and the ability to initiate the action necessary to ensure success (Iheriohanma, 1999).

A typical entrepreneur is a risk-taker; a man/woman who braves in uncertainties, strives through thick and thin, who with wit, devotion to duty and singleness of purpose, creates industrial activities where none existed (Nwachukwu, 1990). An entrepreneur makes innovations in materials, methods and services, innovations in the products and innovations in the entire economy by opening up new marketing and exchange opportunities. He/she is someone who is able to adapt the available resources to the environment to make profits. An entrepreneur is someone who can initiate a money-yielding venture and sustainably manage it to create wealth and adds value to life in the society. Four characteristics which make good entrepreneurs are "persistence, motivation, initiative and intuition" (Bardasi et al., 2008). Entrepreneurship has received much attention in recent times. Entrepreneurial policies and

ideas are actively circulating around the world through governmental and non-governmental agencies and through international and local discussions. Entrepreneurial policies and ideas circulate from one country to another often without gender differentiation (Maxfield, 2005). The entrepreneurs direct their energy, initiatives and resources beyond factory production of goods. Entrepreneurship involves the procurement of raw materials, transportation to production centres and collecting and selling the finished goods. The last century has witnessed major gains in women's health, education and employment. Women however, are known to lag behind their male counterparts in a number of ways, particularly in their involvement in social and political affairs [Population Reference Bureau (PRB), 2002]. Women are found to play large and growing roles as entrepreneurs in the United States of America (USA), in Canada and in the United Kingdom, to some extent. But, fewer women than men participate in entrepreneurial activities (Maxfield, 2005; World Bank, 2005).

Entrepreneurial gender gaps (a measure of the difference between the number of men and the number of women that participate in entrepreneurial activities) is largest in the poor countries of the world (Maxfield, 2005). The rate of participation by women varies from one country to another. In a 40-country study by the World Bank (2005), a country like the Philippines recorded 49.9% women entrepreneurs, while only 1.9% women entrepreneurs were recorded in Belgium. Suggestions towards increasing the number of female entrepreneurial skills recommend, venture financing, social networking and effecting changes in the national cultures. These are well documented by Maxfield (2005).

Entrepreneurial activities of men and women in Africa

In Africa, much of the economic activities are in the hands of women who contribute as much as 50% of the gross domestic product (GDP) in a country like Uganda. However, men and women are not equally distributed across the productive sectors. Women are found to play preponderant roles in the agricultural sector, and women entrepreneurs are in the minority. Compared to men, women own a merger 10% of firms in Kenya, Morocco, Nigeria, Senegal and Tanzania; and up to 40% in countries like Burkina Fasso, Cameroon, Cape Verde and Mozambique (Bardasi et al., 2008). The source adds that female entrepreneurs in Africa are mainly found in family enterprises rather than in individual enterprises, except in Kenya and Lesotho.

Men and women differ in their access to, and control over productive and other assets, therefore, economic capacities and incentives are strongly gender differentiated in ways that affect supply response, resources allocation within the household, labour productivity and

welfare (Bardasi et al., 2008). These differences have great implications for the flexibility, responsiveness and dynamism of the economy, and they directly limit economic growth.

For instance, women entrepreneurs in Africa are known to combine business with household tasks; they are more likely to own enterprises together with other family members rather than be on their own and are more likely to live in households with other entrepreneurs and work with family members than their male counterparts (Bardasi et al., 2008). It is observed that either these arrangements will help African female entrepreneurs to combine business with household tasks, or it may result from the obnoxious marital and property rights, which are strongly discriminatory against the females in most African cultures and societies. Moreover, female entrepreneurs in Africa tend to be younger and married than male entrepreneurs. The female entrepreneurs are found only in selected sectors like textile, agro-foods and such tertiary occupations.

Based on household survey data by the World Bank (2005) less than one percent of women of working age in Africa are entrepreneurs, that is, women who own businesses in which they employ hired labour. Even then, most working women in Africa are not formal entrepreneurs. They are rather self-employed or they are what this paper terms 'subsistence entrepreneurs'. The informal sector is important because it provides leverage for participation in the private sector (Bardasi et al., 2005). The informal sector in Africa provides 48% of non-agricultural employment in North Africa and 72% non-agricultural employment in sub-Sahara Africa [International Labour Organisation (ILO) 2002]. The informal sector is generally a source of employment for women and constitutes 43% enterprises owned by women and spans through micro, small and medium scale enterprises (Bardasi et al., 2008).

Nigeria has always sought to industrialize through education. Attention was initially focused on technical education as the avenue for industrializing Nigeria (Etuk, 2000). In recent times, schools, colleges and universities in Nigeria have been urged to develop and implement entrepreneurial education curricula for their students and to redesign the existing curricula to infuse some elements of entrepreneurial skills (Ugwu, 2003). These are done with the belief that fostering a robust entrepreneurial culture will maximize individual and collective economic and social success at the local, national and international scales; irrespective of the belief by some authorities (Kiyosaki and Lechter, 2001) that professional success is no longer solely linked to academic success as it once was.

Entrepreneurial education is hoped to provide the beneficiaries with the skills and motivation which enhance entrepreneurial success in a variety of settings. It is meant to change the learners' attitudes, develop their motivation and feelings in the hope that running a personal business will enhance greater achievement for

Nigerians than being job-seekers (Opara, 2010). Entrepreneurial skill development may also help to tame the tide of high unemployment rates in Nigeria. Indeed, the thinking behind recent emphases on entrepreneurial skill development among Nigerians was recently aptly captured by one of the foremost educationists in Nigeria, Professor Moses Akpanudoh to the effect that "people have to create jobs for themselves as jobs do not go round anymore" (Opara, 2010).

The foremost model to which reference is often made regarding entrepreneurial skill development is McClelland's (1988) theory. Using thematic apperception tests (TAT) McClelland (1988) who was concerned with improving the economic growth and development of the undeveloped countries, identified four main arousal-based and socially-developed motives. These are the achievement motive (n-Ach); the power motive (n-Pow); the affiliation motive (n-Aff); and the avoidance motive (n-Av.). The relative intensity of these motives varies between individuals and between different occupations. The n-Ach is said to be the most critical for any country's economic growth and success. It is linked to entrepreneurial spirit and the development of available resources (Mullins, 2005).

Through years of research, McClelland (1988) identified four characteristics of people with strong n-Ach. These comprise "a preference for moderate task difficulty, personal responsibility for performance, the need for feedback on performance and innovativeness (Mullins, 2005). People who are endowed with the spirit of innovativeness constantly search for variety and for information on new ways of doing things. McClelland maintained that n-Ach is not hereditary. It results from environmental influences. Possession of high n-Ach is often attributed only to one ethnic group in Nigeria – the Igbos of Eastern Nigeria (Offiong, 1980).

McClelland (1988) developed a four-step model for training people for the development of greater achievement motivation. These comprise: "giving a feedback on performance, modelling for, improving the self-image and encouraging positive thinking (Mullins, 2005). Although, the four steps are important educational processes; the second step (modelling) is very significant in this paper. For educational administrators to successfully inculcate achievement motivation in their students, they should be practising entrepreneurs even at subsistence level. This is the essence of social learning (Bandura, 1969).

The problem and statement of purpose

Nigeria happens to be one of the non-industrialized nations of the world. Education has often been seen as a major avenue for bringing about industrialization of Nigeria. Technical education was initially thought to be the key. This does not offer the needed solution. Attention is now turned to entrepreneurial education as

the key to equipping the Nigerian youth with the skills and motivation necessary for entrepreneurial development and industrialization of the country. The Nigerian Educational Research and Development Council (NERDC) is the body responsible for developing primary and secondary education curricula; presently, it is at work developing entrepreneurial education curriculum for the two levels. The National Universities Commission (NUC) and the other agencies in charge of co-ordinating different categories of tertiary education in Nigeria do not rest on their competence in this regard; they constantly point search lights on their respective institutions through accreditation visits to ensure that their respective institutions embrace entrepreneurial education.

Schools, college and universities in Nigeria are expected to equip learners with the skills which are relevant in the modern world of work, so as to minimize unemployment, a condition, which is very ripe in Nigeria. The theory of entrepreneurial skill development mentions modelling as one way of developing entrepreneurial skills among learners. This implies that to effectively and successfully equip learners with entrepreneurial skills, personnel in schools must themselves practise entrepreneurship so that those studying under them can emulate them.

The research was therefore conceived to examine the degree to which administrators of secondary schools in Southern Nigeria practise entrepreneurship. Gender was of a special interest because literature (World Bank, 2005) informs that much of the African economy is sustained by inputs from female labour. Hence the research examines the extent to which female administrators of secondary schools compare with their male counterparts in entrepreneurial activities and how school personnel model entrepreneurship to their students. The research was set to answer the following research questions:

- (1) To what extent do secondary school administrators in Uyo and other Southern Nigeria engage in entrepreneurial activities?
- (2) What kind of entrepreneurial activities do these secondary school administrators engage in?
- (3) How do female school administrators compare with their male counterparts in entrepreneurial activity categories and overall?
- (4) How do male and female secondary school administrators from the different states in Southern Nigeria defer in their entrepreneurial ratings?

The third and fourth research questions were translated into research hypotheses which stated:

- (5) There is no significant difference between entrepreneurial activity ratings of male and female secondary school administrators in Southern Nigeria.
- (6) There is no significant difference between entrepreneurial activity ratings of male and female secondary school principals from the different states in Southern Nigeria.

RESEARCH METHOD

Southern Nigeria was used for the research area. This includes six out of 36 Nigerian States, comprising Cross River, Akwa Ibom, Abia, Bayelsa, Delta and Edo States. It is the home of some minority tribes in Nigeria including the Efik/Ibibios, the Igbos, the Urhobos and the Edos. Most of this area lies within the equatorial rain forest. In the Southern border, we have the Atlantic Ocean, into which a network of rivers, characteristic of this area, is emptied. Hence, such names as Abia and Cross River are given to two of the component States.

The natural setting gives rise to rapid growth of the vegetation in the area, leading to tall trees and thick forest when there is no deforestation. Farming, fishing and timbering are the major occupations of the people. Since the area is also the oil base of Nigeria, some people find employment in the oil sector and related fields. The area is not highly industrialised. Nevertheless, small and medium entrepreneurial activities abound in the major towns and sea ports in the area and centre on hotels and restaurants, marketing and construction work. Many engage in service occupations for schools and colleges. There are many primary and secondary schools and each State has at least a university which may be State or Federally-financed. Literacy rate is quite high being 70.4% (National Bureau of Statistics, 2006).

Research design, population and sample

The descriptive survey design was used in the study because the research sought to describe the rate of entrepreneurial activities existing among secondary school administrators through opinion survey, without manipulating the variables. The study population comprised all the secondary school administrators (principals) in the Southern Nigeria.

A sample of 349 was drawn from a population of 1,289 public school administrators through the multistage random sampling technique. Three out of the six States in the region were selected through the simple random sampling technique of balloting. The schools to be visited from each State were selected through simple random sampling technique of balloting too. A triple-stage sample technique was therefore used. The population of administrators and the sample drawn from each State are shown in Table 1.

Legend

The population of secondary school administrators from Edo State was extrapolated from internet figures.

Instrumentation

The instrument for data collected was a 20-item questionnaire, developed by the researchers. Titled, "Involvement in Entrepreneurial Activities by Secondary School Administrators' Questionnaire (IEASSAQ)", the instrument had three sections A, B, C. Section A had two items. Item number one sought information of State from where the data were collected while item number two solicited information on the gender (sex) of the respondents. Section B had eight items. The first item in this section (item 3) sought a 'Yes/No' response as to whether the respondents had any business venture. It was therefore, a global item on the involvement of the school administrators in entrepreneurial activities.

Items number four to 10 consisted of a list of seven possible entrepreneurial areas. Respondents were asked to select with a tick (✓) the ones which they engaged in. This was a follow-up from item number 3. Section C consisted of 10 specific items (11 to 20), which were meant to measure the entrepreneurial activity ratings

Table 1. Population and sample distribution.

S/N	State	Administrators population	40% Sample	Males	Females
1	Akwa Ibom	227	91	48	43
2	Cross River	261	104	64	40
3	Abia	283	113	78	25
4	Delta	316	126	-	-
5	Edo	100	40	-	-
6	Bayelsa	152	61	23	38
	Total	536	369	213	156

Table 2. Frequency and percentage table showing the extent to which secondary school administrators in Southern Nigeria engage in entrepreneurial activities.

State	N	Frequency and percentage of positive/negative response			
		Yes		No	
		N	%	N	%
Akwa Ibom	91	42	46	49	54
Bayelsa	61	25	41	36	59
Cross River	104	48	46	56	54
Abia	113	30	27	83	74
Total	369	145	39	224	61

of the respondents. A 5-point Likert type scale ranging from strongly agree to strongly disagree was used to measure the extent to which the respondents had initiated entrepreneurial activities, and the level of support they get from their present family members. Two items in this section, 15 and 19 were negatively-worded.

The instrument was validated by the three members of the team, who read through and made the necessary inputs. Some items were re-worded while those considered not very necessary for the present study were dropped. The length of the instrument was reduced from 32 to 20. The average score of the instrument by each of the three members of the research team on a 5-point scale was 4.00. The face content and construct validities of the instrument were therefore adjudged to be high. The Cronbach alpha reliability coefficient of the instrument was 0.78. This was established by administering the instrument to 40 school administrators, who were not earmarked for the study.

The instrument was administered with the help of trained research assistants, being the post-graduate students of the University of Uyo, each being an indigene of the State to which he/she was sent to collect data. All the copies of the questionnaire administered were completed and retrieved on the spot thus ensuring a zero mortality rate.

RESULTS

The data collected were analyzed and tabulated based on the research questions and the hypotheses which guided the study. These are presented in the paper that follows:

Research Question 1

To what extent do secondary school administrators in Southern Nigeria engage in entrepreneurial activities?

Table 2 shows that 42 (46%) secondary school administrators in Akwa Ibom State claimed to be involved in entrepreneurial activities while 49 (54%) claimed they do not. In Bayelsa, Cross River and Abia States 25 (41%), 48 (46%), 30 (24%) secondary school administrators claimed involvement in entrepreneurial activities. On the other hand, 36 (59%), 56 (54%) and 83 (74%) respectively claimed they do not. Table 2 further shows that out of 369 secondary school administrators sampled in the Southern States of Nigeria, only 145 (39%) engaged in entrepreneurial activities while majority (224, 61%) claimed not to be involved in such activities. The number that engages in entrepreneurial activities is smaller than the number of those that do.

Research Question 2

What kind of entrepreneurial activities do secondary school administrators in Southern Nigeria engage in?

Table 3 shows the distribution of the secondary school administrators among the seven listed entrepreneurial activities.

These were agricultural activities (A), supply of materials (B), supply of service (S), trading (D), running a school (E), running a restaurant (F) and transportation business (G). Three ventures which stood out as those mostly engaged in by the sampled administrators were agriculture, (A) supply of materials (C) and trading (D), which 35 administrators respectively, claimed to be involved in.

Table 3. Frequency and percentage counts of the kinds of entrepreneurial activities engaged in by secondary school administrators in Southern Nigeria.

States	Total number (N)	Number engaged in entrepreneur	A	B	C	D	E	F	G	Total
Akwa Ibom	91	42	8 (19.0)	3 (7.0)	5 (12.0)	21 (50.0)	2 (5.0)	3 (7.0)	-	42 (46.0)
Bayelsa	61	25	8 (32.0)	3 (12.0)	9 (36.0)	5 (20.0)	-	-	-	25 (41.0)
Cross River	104	48	15 (31.0)	8 (16.0)	8 (16.0)	10 (21.0)	7 (14.0)	-	-	48 (46.0)
Abia	113	30	4 (13.0)	12 (40.)	10 (33.0)	4 (13.0)	-	-	-	30 (27.0)
Overall	369	145	35 24	26 18	32 22	40 28	9 6	3 2	-	145 39.0

A, Agriculture; B, supply of materials; C, supply of services; D, trading; E, running a school; F, running a restaurant; G, transportation business. The figures in bracket are percentages.

Table 4. Mean and standard deviation table showing how female school administrators compared with their male counterparts in entrepreneurial activities ratings.

	Sex	N	Mean	SD
Entrepreneurial activities	Male	213	30.91	6.79
	Female	156	31.13	5.90
Total		369		

When the states are taken individually, school administrators in Abia State are keen in the supply of materials (40%), those in Cross River are keen in agriculture (31%) and trading (21%), those in Bayelsa State excel in material supplying (21%) and those in Akwa Ibom State are keen in trading (50%).

Research Question 3

How do male and female school administrators from Southern Nigeria differ in their entrepreneurial activities ratings?

In Table 4, the group mean is 30.91 for male administrators and 31.13 for female school administrators. The difference in the group means indicates that female secondary school administrators do better in entrepreneurial activities ratings than their male counterparts. The standard deviations of 6.79 and 5.90 are for males and females respectively, which mean that the variation of female scores was closer to the mean than that of their male counterparts.

Research Question 4

How do male and female secondary school administrators

from the different states in Southern Nigeria differ in their entrepreneurial activities ratings?

In Table 5, except in Abia State where the mean entrepreneurial activity ratings of the male school administrators (30.42) was higher than that of the females (27.71), the entrepreneurial activity ratings of the female secondary school administrators were generally higher than those of their male counterparts. That was the case in Akwa Ibom, Bayelsa and Cross River States where the mean scores for the females/males were (31.00/30.98), (32.03/31.26) and (33.40/31.33) respectively. Moreover, the mean score for the female secondary school administrators in Abia State (27.71) was lower than the overall mean score for their state (29.58) and the whole Southern region (31.00). On the contrary, the mean score of female school administrators in Cross River (33.40) was higher than the mean score for their State (32.13) and that of the overall Southern state (31.00). The standard deviations of these two groups of female administrators (from Abia and Cross River States) are the narrowest, that is, 4.78 value was for the female administrators from River State while 3.30 value was for their counterparts from Cross River State. This indicates that the scores from each group of female administrators did not vary much from their means.

Table 5. Mean and standard deviations showing the degree to which male and female secondary school administrators in the sampled southern states in Nigeria differ in their entrepreneurial activities ratings.

Categories	States				
	Akwa Ibom	Bayelsa	Cross River	Abia	Overall
N(Males)	48	23	64	78	213
$\bar{0}$	30.98	31.26	31.33	30.42	30.91
SD	6.20	8.05	7.27	6.42	6.79
N(Females)	43	38	40	35	156
$\bar{0}$	31	32.03	33.40	27.71	31.13
SD	6.83	6.56	3.30	4.78	5.90
N(Overall)	91	61	104	113	369
$\bar{0}$	30.99	31.74	32.13	29.58	31.00
SD	6.47	7.10	6.12	6.07	6.42

H₁: There is no significant difference between entrepreneurial activity ratings of male and female secondary school administrators in Southern Nigeria

In Table 6, the calculated t-value of -0.321 was observed to be less than the critical t-value of 1.650 at 0.05 alpha level with 367 degrees of freedom. This result formed the basis for retaining the null hypothesis that there is no significant difference between entrepreneurial activity ratings of male and female secondary school administrators in Southern Nigeria. In other words, male and female secondary school administrators in Southern Nigeria did not differ in the ratings for entrepreneurial activities.

H₂: There is no significant difference between entrepreneurial activity ratings of male and female secondary school administrators from different states in Southern Nigeria.

Table 7 reveals that the calculated values for male and female secondary school administrators ratings in Akwa Ibom (-0.02), Bayelsa (-0.41) and Cross River (-1.069), were less than the critical t-values of 1.968 at 0.05 alpha level with their respective degrees of freedom, 89, 59 and 102. These results were not significant and the null hypothesis that there is no significant difference between entrepreneurial activity ratings of male and female secondary school administrators from the different states in Southern Nigeria was retained.

However, for the male and female administrators in Abia State, the calculated t-value of 2.23 was greater than the critical t-value of 1.968 at 0.05 alpha level with 111 degree of freedom. Therefore, the null hypothesis was rejected in the case of Rivers State.

Table 8 reveals the values of the corrected model, intercept, states and sex versus states respectively at 0.05 alpha level with 7 and 361 degrees of freedom. The

calculated F-value for sex (0.003) was not significant. These results show that the states (Akwa Ibom, Cross River and Abia) accounted for differences in ratings while sex did not account for the differences. Therefore, the null hypothesis was rejected at the instance of States and retained at the instance of sex.

The significant F-value of the states indicates generally that secondary school administrators of different states differed significantly in their entrepreneurial activity ratings. It did not indicate which of the states differed significantly in their ratings. To determine the states that differed significantly from others, a multiple comparison of the group means was carried out by a post hoc analysis using Fisher's least significant difference (LSD) technique.

Result summary

1. Secondary school administrators in Southern Nigeria engage in entrepreneurial activities. The extent at which they do so is small.
2. Three ventures which secondary school administrators in Southern Nigeria centre their entrepreneurial activities are trading, agriculture and supply of materials.
3. Female secondary school administrators in Southern Nigeria engage more in entrepreneurial activities than their male counterparts but the difference is not statistically significant.
4. Among the four States sampled, the entrepreneurial activity ratings of the female secondary school administrators in the individual states were generally greater than those of their male counterparts except in Abia State of Nigeria. The differences based on sex were not significant, but differences based on the States were significant. Entrepreneurial ratings of secondary school administrators in Abia State were established to be significantly different from those of their counterparts from the other sampled States.

Table 6. Independent t-test of the difference between entrepreneurial activity ratings of male and female secondary school administrators in southern Nigeria.

	Sex	N	mean	SD	t-cal
Entrepreneurial activity ratings	Male	213	30.91	6.79	-0.321
	Female	156	31.13	5.90	

Significance at 0.05; critical t = 1.650; df = 367; N = 369.

Table 7. Result of t-test analysis for significant difference between entrepreneurial activity ratings of male and female secondary school administrators from the different states in Southern Nigeria.

States	Sex	N	Mean	SD	t-cal	df
Akwa Ibom	Male	48	30.98	6.20	-0.02	89
	Female	43	31.00	6.83		
Bayelsa	Male	23	31.26	8.05	-0.41	59
	Female	38	32.03	6.56		
Cross River	Male	64	31.33	7.27	-1.69	102
	Female	40	33.40	3.30		
Abia	Male	78	30.42	6.42	2.23	111
	Female	35	27.71	4.78		

Table 8. Result of multiple analysis of the difference in entrepreneurial ratings of male and female secondary school administrators in Southern Nigeria.

Source	Sum of squares	Degree of freedom	Mean square	F	Sig.
Corrected model	682.719	7	97.531	2.428*	0.019
Intercept	314289.771	1	314289.771	7825.661*	0.000
Sex	0.114	1	0.114	0.003	0.958
States	566.626	3	188.875	4.703*	0.003
Sex versus states	291.235	3	97.078	2.417*	0.066
Error	14498.278	361	40.161		
Total	369852000	369			
Corrected total	15180.997	368			

a. R squared = 0.045 (Adjusted R squared = 0.026).

*Significant at 0.05; critical t = 1.968; $F_{7, 361} = 2.05$; critical r = 0.113; df = 361; N = 369.

DISCUSSION

Table 2 shows the frequency counts and percentage counts of Yes/No responses to item number three of the instrument. Out of the 369 respondents, 145 (39%) claimed to be involved in entrepreneurial activities while 224 (61%) claimed not to be involved. The proportion of the sampled set of school administrators who engage in entrepreneurial activities is less than those who do not. This finding is contrary to the tenets of Bandura (1969) and McClelland (1988), that educators could successfully inculcate achievement motivation in their students by serving as models for them. The finding from these set of secondary school administrators is at variance with the educational policy in Nigeria where schools are expected to implement entrepreneurial education curricula so that

school leavers can create jobs for themselves (Ugwu, 2003; Opara, 2010).

A possible explanation for the low entrepreneurial activity claim by this set of respondents is that majority of them may be at cross-roads and at a loss of the current trend in the world. When so many school administrators lag behind in embracing the new trend in educational practices, they are not likely to have sufficient experiences to pass on to their students. They are likely to implement the new entrepreneurial curriculum in the old method of talk and chalk. Their ex-students would most probably be thrown into the job market looking for paid employment when they may not even have the requisite skills to be gainfully employed. Such a situation would not augur well for sustainable development in Nigeria.

Table 9. Results of multiple comparisons using Fisher's LSD of states influence on secondary school administrators' ratings on entrepreneurial activities.

States (I)	States (J)	Mean Difference (I – J)	Std. error	Sig.
Akwa Ibom	Bayelsa	-0.75	1.05	0.476
	Cross River	-1.14	0.91	0.213
	Abia	1.40	0.89	0.116
Bayelsa	Akwa Ibom	.75	1.05	0.476
	Cross River	-0.39	1.02	0.705
	Abia	2.15*	1.01	0.033
Cross River	Akwa Ibom	1.14	0.91	0.213
	Bayelsa	0.39	1.02	0.705
	Abia	2.54*	0.86	0.003
Abia	Akwa Ibom	-1.40	0.89	0.116
	Bayelsa	-2.15*	1.01	0.033
	Cross River	-2.54*	0.86	0.003

The result in Table 8 shows that secondary school administrators from Abia State differed significantly from those in Bayelsa State (2.15) and Cross River (2.54).

*The mean difference is significant at the 0.05 level.

CRS, Cross River State; AKS, Akwa Ibom State.

In Table 3, three entrepreneurial activities which stand out as being the most engaged in by secondary school administrators in Southern Nigeria, these are trading, where 40 (28%) of the respondents who engage in entrepreneurial activities fall into, 35 (24%) of them are into agriculture and 32 (22%) are into supply of materials. This finding agrees with assertions by Bardasi et al. (2008) that agriculture is an area with a great deal of entrepreneurial activity, especially among women in Africa. This is so because the Nigerian economy is mostly supported by informal agricultural activities. Some families may exist in cities without a plot of land to themselves for farming, but not so in the rural communities, where every family must have its own plot of farmland. Secondary school communities in Nigeria are designed to resemble the village settings. Not many schools exist without plots of land for teachers to farm. Trading is also a very common entrepreneurial activity in the area of study. Any school personnel who do not have one thing or another to sell are regarded as being lazy. Moreover, the Nigerian economy is so adverse on the incomes of paid employees that those who can afford it take up additional income yielding ventures. Since the working hours for school personnel do not permit them to take up additional paid employment, many take up different forms of personal businesses including agriculture, trading, supplying of building materials, restaurant business and all that, depending on the individual predispositions and resources.

In Tables 4 and 5, the mean entrepreneurial activity ratings of the male respondents are 30.91, while that of their female counterparts is 31.13. The mean score for

the female secondary school administrators in Southern Nigeria was therefore higher than that of the males. When the mean scores for the males and the females was subjected to independent t-test (Table 6), no statistically significant difference was established between the two sets of scores. This implies that there is no difference between the entrepreneurial activity ratings in the actual populations of the male and female secondary school administrators in Southern Nigeria.

In this study, when the scores of males and females were subjected to multiple regression analysis (Table 7 and 8) on the basis of sex and state of origin, statistically significant differences were again recorded with calculated F-values of 4.70 for comparison on state basis and F-value of 2.42 when sex data were paired against state data. These F-values are both higher than the critical F-value of 2.05 at 3, 1 and 361 degrees of freedom respectively. These indicated that there was statistically significant differences exist in the actual population on the basis of gender of these administrators from the different States. When the data was subjected to Fisher's LSD multiple comparison (Table 9), the difference was established to exist between secondary school administrators in Abia State and those in the other States in South-South Nigeria where the females did below average in their entrepreneurial ratings (Table 5).

The establishment of no significant difference between male and female secondary school administrators in their involvement in entrepreneurial activities does not agree with assertions by Bardasi et al. (2008) that much of the economic activities in Africa are in the hands of women. A possible explanation why the female administrators in

Abia State of Nigeria appeared to perform below their counterpart in other states in their involvement in entrepreneurial activities is probably because most of them enjoy comfortable life styles from their husbands, children and relations incomes. Among the four states studied, Abia State happens to be the most industrialized with companies and related industries. Most residents of Abia State may get one form of income or another from companies. Such a life style may help to weaken their achievement motivation and the enterprise psyche of those so affected.

Conclusion

More secondary school administrators in Nigeria need to be involved in entrepreneurial activities. The males should emulate their male counterparts in the outer world who take the lead in entrepreneurial activities. This is important in public secondary schools in Southern Nigeria because the males form the majority occupying administrative positions. Involvement of secondary school administrators in entrepreneurial activities is one practical way of inculcating entrepreneurial spirit in the Nigerian youths and ushering in sustainable development in Nigeria.

RECOMMENDATIONS

Arising from the findings of the study, the following recommendations are proffered:

1. Secondary school administrators in Southern Nigeria (both males and females) who are not involved in any entrepreneurial activities should start. This is one practical way of teaching entrepreneurship to students, which the school curriculum now emphasizes.
2. Government which is the proprietor of public school, should encourage entrepreneurial development in schools through enacting policies, implementation of entrepreneurial programmes in schools and granting loans and grants to help nourish the new ventures in schools.
3. Female administrators of public secondary schools in Abia State should get involved in entrepreneurial activities to be able to transfer the skills to their students.

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APPENDIX

INVOLVEMENT IN ENTREPRENEURIAL ACTIVITIES BY SECONDARY SCHOOL ADMINISTRATORS' QUESTIONNAIRE

Information: This is an academic research. It has nothing to do with your place of employment. If anything, this research is meant to encourage entrepreneurship among paid employees.

SECTION A: PERSONAL DATA

- 1. State:
- 2. Gender: Male Female

SECTION B: NATURE OF BUSINESS VENTURE

- 3. Do you have any money-yielding venture outside your paid employment?
Yes No
- In nos. 4 – 10 indicate with a tick (✓) the nature of your business venture if you have any:
- 4. Agriculture (poultry, piggery included) 8. Running a school
- 5. Supply of materials 9. Running a restaurant
- 6. Supply of your services (e.g. mechanic) 10. Transportation
- 7. Training (wholesale and retail)

SECTION C: ENTREPRENEURIAL RATING OF RESPONDENTS

Instruction: Indicate the extent to which you agree/disagree with the following statements in reference to your involvement level in money-yielding ventures.

S/N	ITEMS	RESPONSE CATEGORIES				
		SA	A	UN	D	SD
11	I personally have created a business venture on my own					
12	I did not start my own business from someone else					
13	I have managed a small-medium-sized business beyond start-up level					
14	I have steered a company into a high growing concern					
15	My venture is a family company which I don't want to see it die					
16	I have initiated some money-making venture though not a company					
17	I have supported someone (at least once) who initiated a money-making venture					
18	I run a big business concern					
19	I created my own business from a bigger family business					
20	Most of the works in my business are done by my family members					