

Full Length Research Paper

Entrepreneurial skills required by women retirees for processing of pineapple fruit into juice as a sustainable business in Enugu state, Nigeria

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This paper identified entrepreneurial skills required by women retirees for processing of pineapple fruit into juice as a sustainable business in Enugu State, Nigeria. Three research questions and three hypotheses guided the study. The study made use of survey research design. The population for the study was 184 made up of 11 local pineapple processors and 173 teachers of Home Economics in Enugu State, Nigeria. A 32-skill item questionnaire was used for data collection. The questionnaire was validated by three experts. Split-half technique and Pearson product moment correction method were used to determine the internal consistency of the instrument. A reliability coefficient of 0.89 was obtained. Mean and standard deviation were used to answer the research questions and t-test statistics was used to test the hypothesis. It was found that women retirees required 9 skills in planning for pineapple fruit processing business, 16 in processing pineapple fruit into juice and 7 in marketing of pineapple juice. It was recommended that the identified skills be used to retrain women retirees in pineapple fruit processing business.

Keywords: women retirees, processing, entrepreneurial, skills.

INTRODUCTION

Pineapple, *Ananas cosmosus*, is a fruit vegetable. David (1986) described pineapples as a short herbaceous perennial plant with 30-80 through-shaped and pointed leaves, 30-100 cm along, surrounding a thick stem. Pineapples are auto sterile and fruits are developed partenocarpically, that is, the fruits are developed from aggregate of inflorescences. Wikiversity (2009) stated that pineapple, based on the fruit characteristics are sorted into Spanish group, queen group and cayenne group. The author wrote that pineapple fruit is a good source of Vitamin B₁ and brometin. Shu (1999) observed that pineapple was originally consumed only as a fresh fruit but with the development of the processing industry, the fruit is now prepared and consumed in various forms such as pineapple chunks, slices, juice, syrups, jams, crushed pineapple, sliced pineapple and so on. The author continued that wastes from processing the fruit are now further re-processed into sugar, wine,

vinegar, animal feed and so on. Newman (1988) said that steps involved in processing pineapple fruit include size grading the fruit, crown removal, through washing, peeling, coring slicing and punching the fruit. With reference to this study, processing is the act of transforming pineapple fruit into pineapple juice in order to increase its period of availability and acceptance by consumers. In Enugu State, pineapple fruit can be processed by women retirees for sustainable living.

Women retirees, in the context of this study, are adult female individuals who have disengaged from the initial employments after long services but are still willing and able to continue their existence in a desirable but less strenuous occupation with affordable investment. For the women retirees to re-engage in processing pineapple fruit into juice as a business, there require entrepreneurial skills.

Entrepreneurial, in the view of Meredith, Nelson and Neck (1990), means combining personal characteristics, financial means and resources within one's environment. Sett (2004), described being entrepreneurial as having quality business vision, opportunity, mission, strategies

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and resources. In the context of this study, entrepreneurial means the ability of the women retirees to find an opportunity and gather the necessary resources to invest in the business in which they are interested and skilled.

Skills, in the view of Ibrahim (2007), is a specified ability to do something well. Ejiofor (2010) explained skills as well established habits of doing things by people. Onu and Ugwuoke (2009) speculated that one who lacks skills may not be useful to himself and the society. This implies that a woman retiree who lacks entrepreneurial skills in processing pineapple may not be able to establish the business, let alone sustaining it.

In Enugu State, Nigeria, the researchers- Asogwa, Olaitan and Asouzu (2009), observed that processing pineapple fruit into juice requires minimal capital involvement that can be accommodated within the pension of women retirees to sustain their living if they possess the entrepreneurial skills. It was assumed that processing pineapple into juice will be a profitable business with less or no competition for market.

The purpose of this study therefore was to identify entrepreneurial skills required by women retirees for processing of pineapple fruit into juice as a sustainable business in Enugu State.

Specifically, the study sought to identify skills in:

- Planning for pineapple fruit processing business.
- Processing pineapple fruit into juice
- Marketing of pineapple juice.

METHODOLOGY

Three research questions and three hypotheses guided the study. Survey research design was adopted for this study. Olaitan, Ali, Eyo and Sowande (2000) stated that survey research design in the plan, structure and strategy that the design is the plan, structure and strategy that the investigator wants to adopt in order to obtain solutions to research problems using questionnaire for collecting, analyzing and interpreting the data. Questionnaire was developed and used for collecting data from respondents.

The population for the study was 184 made up of 11 local pineapple processors and 173 teachers of Home Economics in Enugu State. The entire population was involved in the study because the size was small.

A 32-skill item questionnaire was developed from literature reviewed and industry and used for data collection. The questionnaire had a four-point response scale options for highly required (HR), averagely required (AR), slightly required (SR) and not required (NR) with a corresponding value of 4, 3, 2 and 1 respectively. Three experts validated the questionnaire one from Home Economics Unit, Department of Vocational Teacher Education, one from Crop Science Department, University of Nigeria, Nsukka and one from pineapple industry in Anambra State. Their corrections and

suggestions were used to produce the final copy of the questionnaire. Pearson product moment correlation method was used for determination of internal consistency of the questionnaire.

A reliability coefficient of 0.89 was obtained. Six research assistants who were familiar with the area of the study were hired and given orientation on how to administer the questionnaire to the respondents. One hundred and eighty four copies of the questionnaire were administered on the respondents and one hundred and eighty copies of the questionnaire were retrieved and analyzed using the statistical package for social sciences (SPSS).

Weighted mean and standard deviation was used to answer the research questions, while t-test statistics was used to test the hypothesis of no significant difference at 0.05 level of significance. A mean of 2.50 was used for decision-making. Any item with a mean rating of 2.50 or above was regarded as not required. Also, any item with a standard deviation of 1.96 and below revealed that the respondents were close to the mean and not too far from one close to the mean and not too far from one another in their responses. The null hypothesis of no significant difference was accepted for any item whose t-calculated value was less than the t-table value, while it was rejected for any item whose t-calculated value was greater than the t-table value.

RESULTS

The results for the study were obtained from the research questions answered through data collected and analyzed.

Research Question 1

What are the skills required by women retirees in planning for pineapple fruit processing business?

Hypothesis 1

There is no significant difference in the mean ratings of the respondents of local pineapple processors and teachers of home economic on the skills required by women retirees in planning for pineapple fruit processing business. The data for answering research question 1 and testing hypothesis 1 were presented in table 1.

The data presented in Table 1 revealed that all the 9 items had their mean values ranged from 3.44-3.94. This showed that the mean values were above the cut-off point of 2.50, indicating that the respondents agreed that all the 9 items were the skills required by women retirees in planning for pineapple fruit processing business. The able also showed that the deviation of the responses ranged from 0.76-1.08, indicating that the respondents

Table 1. Mean Ratings and t-test Analysis of the Responses of Local Pineapple Processors and Teachers of Home Economics on Skills Required by Women. Retirees in Planning for Pineapple Fruit Processing Business. (N= 180)

S/N	Item Statements	\bar{X}_1	\bar{X}_2	\bar{X}_g	SD _g	t-cal	Remarks
1	Formulate specific objective for pineapple juice business.	3.72	3.63	3.94	0.90	1.25	*NS
2	Review the objectives periodically to meet economic or business situation	3.67	2.47	3.58	0.83	0.81	*NS
3	Decide on the location of the pineapple justice business	3.11	2.31	3.62	0.97	0.26	*NS
4	Draw up programme to cover different stages of processing	3.90	3.82	3.68	0.99	0.11	*NS
5	Identify relevant personnel to assist in the business	3.26	2.46	3.49	0.80	1.19	*NS
6	Identify market outlet for pineapple juice	3.99	3.86	3.86	0.79	0.76	*NS
7	Identify sources of fund to establish the businesses	3.11	1.97	3.59	0.98	0.39	*NS
8	Identify relevant records to keep for the business	3.33	2.12	3.88	1.08	0.96	*NS
9	Make budget for pineapple justice business	3.50	2.28	3.60	1.01	0.29	

\bar{X}_1 = Mean of local processors \bar{X}_2 mean of Home Economic Teachers, \bar{X}_g = ground mean, SD_g = ground standard deviation, t-table = 1.96, t-cal= t-calculated value, N=180, P ≤ 0.05, DF= degree of freedom (178), NS = Not significant, * = required, ** = Not required.

were not far from the mean and from the opinion of one another in their responses. The table revealed that all the 10 items had their t-calculated values less than their t-table values at probability of P ≤ 0.05 level of significance and 178 degree of freedom.

This indicated that there was no significant difference in the mean ratings of the responses of the two groups of respondents on the skills required by women retirees in planning for pineapple fruit processing business. Therefore, the null hypotheses of no significant difference were accepted for all the items.

Research Question 2

What are the skills required by women retirees in processing pineapple fruit into juice?

Hypothesis 2

There is no significant difference in the mean ratings of the responses of local pineapple processors and Home Economic teachers on the skills required by women retirees in processing pineapple fruit into juice.

The data for answering research question and testing hypothesis 2 were presented in Table 2.

The data presented in table 2 revealed that all the 16 items had their mean values ranged from 3.06-3.93. This showed that the mean values were above the cut-off point of 2.50, indicating that the respondents agreed that the 16 items were skills required by women retirees in processing pineapple fruit into juice. The table also showed that the standard deviation of the responses ranged from 0.71 – 1.13, indicating that the respondents were not too far from the mean and from the opinion

Table 2. Mean Ratings and t- test Analysis of the Responses of Local Pineapple Processors and Home Economic Teachers on Skills Required by Women Retirees in Processing Pineapple Fruit into Juice. (N=180)

S/N	Item Statements	\bar{X}_1	\bar{X}_2	\bar{X}_g	SD _g	t-cal	Remarks
1	Source for pineapple fruit to process from market or locally from farmers.	3.72	3.68	3.94	0.90	1.25	*NS
2	Sort out spoiled pineapple fruit and discard them	3.98	3.93	3.64	0.94	0.25	*NS
3	Wash the pineapple fruit thoroughly	3.97	3.82	3.55	0.99	0.21	*NS
4	Peel pineapple fruit to remove the cover using knife or machines	3.88	3.85	3.82	1.01	0.84	*NS
5	Cut peeled pineapple fruit into small pieces and grind with grinder	3.98	3.78	3.36	0.81	0.85	*NS
6	Squeeze the pulp using pressure machine to obtain pineapple extract	3.99	3.79	3.88	0.95	1.01	*NS
7	Measure citric acid, water and pineapple extract into a pot in the ration of 0.6:1:4 by volume and stir	3.73	3.68	3.19	1.13	1.21	*NS
8	Pasteurize//heat the mixture for 15 minutes at 80°C	3.96	3.40	3.06	0.77	0.34	*NS
9	Add flavor (e.g. vanilla) to a specification.	3.37	3.24	3.86	0.91	0.54	*NS
10	Taste the juice for quality or standard and adjust if necessary	3.72	3.68	3.94	0.90	1.25	*NS
11	Filter the juice into a tray basin/bowel when done	3.49	3.22	3.62	0.74	0.54	*NS
12	Pour juice into clean bottles and cork them immediately.	3.63	3.36	3.25	0.71	0.19	*NS
13	Arrange the bottles in a pot/autoclave and sterilize at 85°C for 10-15 minutes	3.42	3.18	3.58	1.02	0.28	*NS
14	Remove the bottle and put them into fresh water to cool	3.63	3.53	3.74	0.76	0.32	*NS
15	Remove the bottles from water and keep to dry	3.98	3.93	3.64	0.94	0.24	*NS
16	Label the bottles and store	3.96	3.40	3.06	0.77	0.34	*NS

\bar{X}_1 = Mean of local processors \bar{X}_2 mean of Home Economic Teachers, \bar{X}_g = ground mean,

SD_g = ground standard deviation, t-table = 1.96, t-cal= t-calculated value, N=180, P ≤ 0.05, DF= degree of freedom (178), NS = Not significant, * = required, ** = Not required.

one another in their responses. The table revealed that all the 16 items had their t-calculated values less than their t-table values at probability of ≤ 0.05, level of significance and 178 degree of freedom. This indicated that there was no significant difference in the

mean ratings of the responses of the two groups of respondents on the skill required by women retirees in processing pineapple fruit into juice. Therefore, the null hypothesis of no significant difference was accepted for all the items.

Table 3. Mean ratings and t-test Analysis of the Responses of Local Pineapple Processors and Teachers of Home Economics on skills required by Women Retirees in Marketing of Pineapple Juice. (N=180)

S/N	Item Statements	\bar{X}_1	\bar{X}_2	\bar{X}_g	SD _g	t-cal	Remarks
1	Make market survey for pineapple juice	3.37	3.34	3.36	0.91	0.54	*NS
2	Sort juice into groups using size of bottles	3.72	3.68	3.94	0.90	1.25	*NS
3	Fix prices for each group	3.73	3.65	3.19	1.13	1.21	*NS
4	Advertise the product locally or through the media	3.98	3.98	3.36	0.81	0.85	*NS
5	Sell the buyers at the site or in the market	3.73	3.68	3.94	0.90	1.25	*NS
6	Keep appropriate record of sales	3.96	3.40	3.06	0.71	0.34	*NS
7	Calculate the expenditure and income to determine profit	3.91	3.76	3.03	0.79	0.67	*NS

\bar{X}_1 = Mean of local processors \bar{X}_2 mean of Home Economic Teachers, \bar{X}_g = ground mean, SD_g = ground standard deviation, t-table = 1.96, t-cal= t-calculated value, N=180, P ≤ 0.05, DF= degree of freedom (178), NS = Not significant, * = required, ** = Not required.

Research Question 3

What are the skills required by women retirees in marketing of pineapple juice?

Hypothesis 3

There is no significant difference in the mean ratings of the responses of local pineapple processors and the teachers of Home Economics on the skills required by women retirees in making of pineapple juice.

The data for answering research question 3 and testing hypothesis 3 were presented in table 3.

The data presented in Table 3 revealed that all the 7 items had their mean values ranged from 3.03- 3.94. This showed that the mean values were above the cut-off point of 2.50, indicating that the respondents agreed that all the 7 skills were required by women retirees in marketing of pineapple juice. The table also showed that the standard deviation of the responses ranged from 0.77-1.13, indicating that the respondents were not too far from the mean and from the opinion of one another in their responses. The table revealed that all the 7 items had their t-calculated values less than the t-table values at probability of ≤ 0.05 level of significance and 178 degrees of freedom. This indicated that there was no significant difference in the mean ratings of the responses of the two groups of respondents on the skills required by women retirees in marketing of pineapple juice. Therefore, the null hypothesis of no significant difference was accepted for all the items.

DISCUSSION OF RESULT

The result of the study in table 1 revealed that 9 skill

items; formulation of specific objective for pineapple juice business, review of objectives periodically to meet economics of business situation, decision on the location of the pineapple juice business, among others were required by women retirees in planning for pineapple fruit processing business. The result of this study is in agreement with the findings of Akwaji (2006), in a study carried out on work skills required by secondary school graduates for success in cassava processing enterprise in Cross River, where it was found that 11 work-skills were required in planning for processing cassava into chips. The skills included: setting goals for processing cassava into garri flour, chips and starch; review of the goals periodically among others. The result of this study is also in agreement with the findings of Ibrahim (2009) in a study carried out on entrepreneurial skills required by secondary school graduates for success in rice production enterprise in Kwara State, where it was found out that 11 skills were required in planning for rice production. These included: decision on the type of farming practices to be adopted for growing, processing and marketing of rice, identification of inputs for production, identification of sources of fund and so on.

The result of the study presented in Table 2 showed that 16 skill including; sourcing for pineapple fruit to process from market or locally from farmers, sorting of spoiled pineapple fruit and discarding them, washing the pineapple fruit thoroughly, among others were required by women retirees in processing of pineapple fruit into juice. The result is in agreement with the findings of study by Asogwa, Olaitan and Asouzu (2010), on quality assurance of women in Agriculture in processing bambara groundnut into "okpa" in Anambra State, where it was found out that women in agriculture needed improvement in 23 competency items for processing bambara groundnut into "okpa".

The result of the study presented in Table 3 showed

that 7 skill items; conducting market survey for pineapple juice, sorting juice into groups using size of bottles, fixing prices for each group, among others were required by women retirees in marking of pineapple juice. The findings were similar with the finding of Akwaji (2006), obtained during a study on processing of cassava, where the author found out that 10 skill items were required in making of cassava products. The skills were: carrying out market survey for processing enterprise, advertising the processed cassava product, determining where and when to supply the products and so on. The findings were also in conformity with the findings of Ibrahim (2007), where the author found that 9 skills are required in marketing of rice. The skills included; processing and making storage bags of rice of 50kg per bag, selling to buyers, keeping sales records among others.

The result of the hypothesis tested showed that there was no significant difference in the mean ratings of the responses of the local pineapple processors and the teacher of Home Economics on skills required by women retirees in planning for pineapple fruit processing business, processing of pineapple fruit into juice and marketing of pineapple juice. The implication of this finding was that the professional differences of the two groups of respondents did not significantly influence their responses on the skills required by women retirees in planning, processing and marketing of pineapple juice as a sustainable business.

CONCLUSION

In Enugu State, it was observed that retirees are anxious to get engaged in any profitable business that requires minimal capital involvement. It was also observed that processing pineapple fruit into juice requires minimal capital involvement that could be accommodated within the pension of women retirees to sustain their living. Based on the observations, this study was carried out to identify entrepreneurial skills required by women retirees in pineapple fruit processing as a life sustaining business. The study found out that 32-skill items are required by women retirees in planning, processing and marketing of pineapple juice as a business. It was therefore, recommended that the entrepreneurial skills identified by this study be utilized for training of retirees in processing

pineapple fruit into juice as a sustainable business. women retirees in planning, processing and marketing of pineapple juice as a business. It was therefore, recommended that the entrepreneurial skills identified by this study be utilized for training of retirees in processing pineapple fruit into juice as a sustainable business.

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