

Traditional Beliefs and Their Effect on Farm Output: Evidence from Akwa Ibom State, Nigeria

O.E. Emmanuel

Department of Agricultural Economics and Extension, University of Calabar, Calabar, Nigeria

Abstract: This study assesses the effects of traditional beliefs and market day system of food distribution, on the use of environmentally sustainable farm practices and the subsequent impact on the farmers' output in some farming communities in Akwa Ibom State, Nigeria. The result shows that both practices reduce the ability of the farmers to apply environmental friendly and sustainable agricultural practices. In particular, every unit of traditional practices applied on crop farms reduce output by 0.43 units, whereas the continued use of the market day system of distribution of farm produce places a limit on the quantity of output the farmer can supply.

Key words: Beliefs, effect, farm, evidence, output, Nigeria

INTRODUCTION

The increasing need to enhance farm output culminated in Nigerian government pursuing policies that gives adequate consideration to the environment. Such policies brought about the introduction of the National Accelerated Food Production program, the National Green Revolution Program, the Operation Feed the Nation, Agricultural Cooperative Development, the Agricultural Credit Guarantee Fund Scheme and the River Basin and Rural Development Program, among others. One common feature of these programs is that they encourage farming practices that ensures the biological communities maintain satisfactory level of interaction with the physical and chemical environment and thus enhancing the resource base of the ecosystem. Unfortunately, one thing that these efforts have had to grapple with is the culture, values and traditional practices, which vary according to ethnic decent in Nigeria. Invariably, in Nigeria and elsewhere, there are several traditional method of farming that are still combined with expressions of spirituality, these external pressures not withstanding (Gonese and Tivafira, 2001; Udoh, 1999).

Two such ethnic practices that persist among the people of Akwa Ibom are the Market Day system of selling foodstuffs and the application of traditional practices on farms.

This study assess the effects of these two ethnic practices on the use of sustainable farm practices on farms and the output of the farmers' in Akwa Ibom State, Nigeria.

The concept of market days: In Akwa Ibom State, the 1st day of the week-Sunday (called Obo in the local language) was reserved for the worship of the supreme

being, the 2nd day Monday (called Edem obo in the local language) and the 3rd day, Tuesday (called Fion aran in the local language) was reserved for the worship of god of the moon; the 4th day, Wednesday, (called Edere etaha in the local language), was a day for festivity, the 5th day, Thursday (called Etaha in the local language) and the 6th day Friday (called Edemetaha in the local language) was set aside for environmental sanitation whereas the 7th day, Saturday (called Fionetok in the local language) was reserved for idol worshipping. Conditioned by the cultural activities of the people, the respective villages selected a convenient day where every member of the village takes their goods to the market for sale. Such approved days became the generally accepted market day where all members of the community are to take their goods and services to the community market place for sale. Apart from being used in the evenings (evening markets), community market places open for business on the community approved market days, which is known by persons outside the community. Although today, there has been enough external pressure that has transformed some of these markets to daily markets, weekly markets of the original traditional settings have remained alive in Akwa Ibom State.

Traditional practices: There are many traditional believes that appear to impact negatively on agricultural progress. Many communities still sacrifice to the gods of the land before the beginning of every planting season, others engage in several other practices with believing that agricultural output growth is dependent upon these traditional practices. In fact, every community exercise control over their cultural institutions, territories, languages, values, knowledge systems and practices. Such control commonly result from the supporting

traditional believes of the people. Tradition believes and practices are essentially generally accepted ways of doing things that are guided by past believes and are usually associated with widely accepted rituals or other forms of symbolic behaviour. In fact, in farming communities where the traditional beliefs is strong, farmers find it difficult to separate the spiritual practices from socio-physical and mental phenomena, instead they consider them strongly as practices that must take place for their agricultural activities to thrive, (Balasubramanian *et al.*, 2003). Invariably, where agricultural practices are associated with traditional beliefs, these beliefs become an important parameter to consider if innovations are to be successfully introduced.

MATERIALS AND METHODS

This study was carried out in Akwa Ibom State, Nigeria. It lies between latitude 4°33 and 7°25 North and longitude 7°25 and 8°25" east and occupies an area of 7,246.01 km². Akwa Ibom state has long rain periods (April to October) and temperature varies between 29 and 34°C all through the year. Agriculture is practiced by about 80% of the population.

This study used principally, primary data, used purposive sampling to select communities involved in the study and simple random sampling to select the respondent in each category. The first category of respondents are crop farmers who operate in communities where the major weekly market day system are still being operated whereas the second category of respondents included crop farmers who operate in localities where farming activities are still tied up with some traditional practices. A total of 340 respondents were included in the study including 260 for market day effect and 80 for the traditional practice effect. Data analysis utilized various statistical tools including the multiple regression analytical technique. In the empirical model, it is postulated that farm output is a function of the number of market days actually used by the farmer and the number of traditional practices in use. In the first empirical model the effects of the number of market days used by the farmers, on the output is tested whereas the second empirical model tests the effect of the number of traditional practices used by the farmers on output produced.

Model 1:

$$Y = f(X_1, X_2, X_3)$$

Where,

- Y = Output in grain equivalent.
- X₁ = Number of market days used by the farmers.
- X₂ = Labor in Man-days.
- X₃ = Farm size hectares.

Model 2:

$$Q = f(X_1+X_2+X_3+X_4+X_5)$$

Where,

- Q = Output in grain equivalent.
- X₁ = Annual income in Naira.
- X₂ = Farm size in hectares.
- X₃ = Labour in man days.
- X₄ = Management (proxy).
- X₅ = Number of traditional practices used.

In order to measure management, the proxy approach was used. This involves the selection and scoring of questions that portrays the nature of management capability of the farmer. In this study, a total of 30 questions were formulated and appropriate responses by the respondents were scored. An individual was scored 3 if the best option was selected; 1 if the least option was selected and 2 if the middle option was selected and the total score was converted into percentage.

RESULTS AND DISCUSSION

This study included 340 respondents, 23.53% of them were farmers who grow various crops in areas where traditional norms feature prominently in agricultural practices, while 76.47% produce various crops in localities where the market day system of distribution of farm produce predominate. The majority of these respondents was in their active years of age, male; married and had obtained at least secondary education. Table 1 shows that 37.06 of the respondents were in the 41-50 years age category, 29.12% were in the 31-40 years category, 18.24% were in the 21-30 years age category and 15.38% were in the 51-60 years age category, respectively. Although, the number of male respondents included in the study was more than the female, the female clearly out numbered their male counterpart among the respondents studied in the analysis of the effect of traditional beliefs on output. Table 1 also shows that 63.82% of the respondents were married, 52.35% were single and 11.18% were divorced while 4.41% were widowed. Although a good portion of the respondents had between 4-7 children, none of the respondents among those studied for the effects of the market days on output had more than seven children. In fact, 10.65% of the respondents all among those studied for the effects of traditional belief on output had between 8 and 11 children. However, the majority of these respondents (58.53%), claimed that they had between 1 and 3 children and had attained formal education. Information available in Table 1 shows that only 27.35% of the respondents had obtained no formal education

Table 1: General characteristics of respondents

Characteristics of respondents	Traditional belief group	Market days group	Total
Age			
21-30	19 (5.59)	43 (12.65)	62 (18.24)
31-40	21 (6.18)	78 (22.94)	99 (29.12)
41-50	27 (7.94)	99 (29.12)	126 (37.06)
51-60	13 (3.82)	40 (11.76)	53 (15.58)
Total	80 (23.53)	260 (76.47)	340 (100.00)
Sex			
Male	35 (10.29)	143 (42.06)	178 (52.35)
Female	45 (13.24)	117 (35.41)	162 (47.65)
Total	80 (23.53)	260 (76.47)	340 (100.00)
Marital status			
Single	9 (2.65)	61 (17.94)	70 (20.59)
Married	35 (10.29)	182 (53.53)	217 (63.82)
Divorced	21 (6.18)	17 (5.00)	38 (11.18)
Widow	15 (4.41)	0 (0.00)	15 (4.41)
Total	80 (23.53)	260 (76.47)	340 (100.00)
No. of children			
None	10 (2.94)	0 (0.00)	10 (2.94)
1-3	26 (7.65)	173 (50.88)	199 (58.53)
4-7	35 (10.29)	87 (25.59)	122 (35.88)
8-11	9 (10.65)	---	9 (2.65)
Total	80 (23.53)	260 (76.47)	340 (100.00)
Education			
No formal education	24 (7.06)	69 (20.29)	93 (27.35)
Primary education	32 (9.4)	61 (17.94)	93 (27.35)
Secondary education	21 (6.18)	108 (31.76)	129 (37.94)
Tertiary education	3 (0.88)	22 (6.47)	25 (7.36)
Total	80 (23.53)	260 (76.47)	340 (100.00)
Land acquisition			
Inheritance	77 (22.65)	121 (35.59)	198 (58.24)
Purchase	3 (0.88)	139 (40.88)	142 (41.76)
Total	80 (23.53)	260 (76.47)	340 (100.00)
Farm size (ha)			
1 and less	57 (16.76)	48 (14.12)	105 (30.88)
1.1-2.0	23 (6.76)	69 (20.29)	92 (27.06)
2.1-3.0	0.00	121 (35.59)	121 (35.59)
3.1 and more	0.00	22 (6.47)	22 (6.47)
Total	80 (23.53)	260 (76.47)	340 (100.00)

Source: Field survey, 2005

where as 27.35% of them had attained primary education: 27.94% has attained secondary education and 7.36% had attained tertiary education.

Farming in this study area utilizes the traditional hoe, machetes and bush burning and the like. The soil fertility sustaining strategies adopted include mulching, the use of chemical fertilizer, farmyard manure and application of house-hold waste on farms. However, an assessment of the extent of use of each of these practices by the respondents revealed that only 41.8% of the respondents applied chemical fertilizer on farms whereas the others did not apply chemical fertilizer; only 20% claimed they applied farmyard manure to the crops and 23.2% claimed they applied house-hold waste to crops.

Table 2 shows that the use of land management practices is average despite the several programmes of government. This is not surprising because the general notion is that traditional sacrifices and other practices are synonymous with high output.

Table 2: Soil fertility sustaining practices

Type of practices	Frequency [n=340]	(%)
Use of chemical fertilizer	142	41.8
None-use	198	58.2
Use of farmyard manure	68	20.0
None-use of farmyard manure	272	80.0
Use of household waste	79	23.2
Non-use of household waste	261	76.8

Source; Field survey, 2005

Table 3: Traditional beliefs in farm

Types of rites	Frequency	(%)
Goat and sheep sacrificed before bush clearing	37	46.25
Masquerades burn the dried residue before planting	23	28.75
Local masquerades run around the entire farm land during planning	9	11.25
Women dance around the farm outbreak of pest	4	5.00
No traditional practices	7	8.75
Total	80	100.00

Source: Field survey, 2005

Types of traditional practices in farms: This study revealed that crop farmers in that study area sacrifice goats to the gods before land clearing; engage the local

masquerades not only to burn the trash after land clearing but also to dance around the farmland during planting.

However, Table 3 shows that only 46.25% of the respondents claimed that they sacrificed goats, before land clearing, 28.75% of them claimed they used masquerades to burn the dried plant residue before planting, 11.25% agreed that they used the local masquerades to run around the entire farm land during planting, whereas only 5% of the farmers use the services of women to run around the farm in cases of pests attack, as this is believed to be the common remedy for outbreak of insect pest.

When one considers the extent of practices of these believes on farms, there appear to be great variations between groups. These variations in the proportion of respondents practicing each traditional believe on farm suggest that in the near future these believes appear to be gradually growing out of use. Already Table 3 shows that at the moment 8.75% of the respondents are no longer using these believes on their farms.

Effect of the number of traditional practices on output:

There is no gainsaying the fact that people with strong believe in the traditional value system give credence to the traditional practice in farms thereby ignoring the use of scientific packages, which are introduced in the existing agricultural programmes to enhance the resilience of the ecosystem. To capture the overall effect of the number of traditional practices performed by the farmers on the output of the farm, the multiple regression analysis was used. The regression model attempts to analyze the effect of the number of traditional practices observed on the farms, (among other variables) on the quantity of farm output produced. The result of the regression analysis is shown below.

$$Y = -0.672 + 7.7E - 5 X_1 + 0.91 X_2 + 7.10E - 3 X_3 + 0.73 X_4 - 0.43X_5$$

$$t_0 = - 0.39; t_1 = 1.703, t_2 = 3.93, t_3 = 0.066, t_4 = 1.69, -t_5 = -3.005*$$

$$R^2 = 41.2\%; \text{ Standard error of estimate.} = 1.81; F - \text{test} = 8.98^*$$

[* = Significant at 1% (2 tailed test.)]

Although, the explanatory variables included in the regression equation explains only 41% of the total variation in the dependent variable, the result of the regression analyses clearly indicates that the number of traditional practices the farmers employ were negatively related to the quantity of output produced. Invariable the

more the number of traditional practices embarked upon by the farmers, the lower the level of farm output produced. However, the annual income, farm size, labour supply and managerial ability of the farmers were positively related to the quantity of output produced. This implies that farming is such that farmers can only increase income by producing more farm output; farm output can only be increased by increasing the land area under cultivation with the use of more labour and application of good farm management practices.

The multiple regression analysis also shows that only the farm size and the number of traditional beliefs practiced on farms have had significant effects of the quantity of output produced by the farmers. Unfortunately, every unit increase in farm size resulted in a less than proportional increase in farmers' output and a unit increase in the number of traditional beliefs practiced on farms reduced output by 0.43 units. The other variables that were not significant in their effects on outputs produced by the farmers contributed less than proportionately to the increase in the quantity of farm products of the farmers. Suffice it to say that, traditional practices on farms influence the pace of application of sustainable farming practices thereby translating into low output for the farmers.

Effect of market day system of distribution of farm produce on the output farmer can produce:

The multiple regression analysis also formed the basis for analyzing the effect maintaining local market days on agricultural output of crop farmers.

$$Y = 0.19 + 0.416 X_1 + 0.621 X_2 + 2.74 X_3$$

$$t_0 = 0.095; t_1 = 0.671; t_2 = 2.084; t_3 = 3.23^*$$

$$F = 8.234^*; \text{ Standard error of estimate} = 3.86; R^2 = 31\%$$

The result of the multiple regression analysis shows that the number of market days used by the farmers increase as output increases. More so, farm output increase with increase in labor and farm size. Although, the R² shows that only 31% of the variation in output could be attributed to the independent variables used in the regression equation, only farm size had significant effect on the output and each of the variables contributed less than proportionately to the output produced. When one considers the magnitude of the coefficients, it is clear that farm size was the most important variable that affected farmers' output. On the other hand, the number of market days used by the farmers in selling farm produce increased with the quantity of farm output that was technically possible to produce. Invariably, for more farm

output to be produced, the farmer must be prepared to transport the produce from one market place to another. In view of the difficulty the farmers are likely to face in such a situation, replacing the traditional weekly market system to the daily market system should be encouraged. This would be invaluable in reducing the risk of moving farm produce from market to market. More so, by dictating time of harvesting, market days stipulate the timing of cash inflow in farms. Using a one day in a week for sales of agricultural produced may actually affect profit of the farmers. In particular, a farmer who is unable to move her perishable produce weekly from one market to market is forced to exhaust stock of perishable goods at reduced prices. The market day system also encourages wastage since crops harvested in excess remains at the close of the market, unless sold. On the whole, the once-a-week selling of farm produce has overtime made farmers to plan production to suit the existing market day situation. This puts a check on the size of operation, how intensively land management practices are used and the quantity of output a farmer can supply to the market.

CONCLUSION

Every community has cultures having spiritual traditions and knowledge system and tries to protect their indigenous resource rights. Unfortunately, this research suggests that the application of spiritual traditions and knowledge systems to agriculture seldom yield positive

outcomes. Instead appropriate land management practices that are supposed to enhance the resilience of the ecosystem and continued sustainability of the agricultural resource base are taken for granted would be invaluable in enhancing the resilience of the ecosystem and ensure sustainability in the agricultural resource base. The call by Norberg-Hodge (2005), for efforts to strengthen communities having these traditional practices were noted, but such communities must be encouraged to optimize the application of scientific practices introduced to enhance sustainability in the agricultural resource base.

REFERENCES

- Balasubramanian, A.V., K. Vijaylakshmi, S. Sridhar and S. Arumugasamy, 2003. Modern Dilemmas and Traditional Insights. In: *Ancient Roots New Shoots* K. Vant Hooft, B. Haverkort and W. Hiemstra (Eds.).
- Gonese, C. and R. Tivafira, 2001. *Eco-Cultural Villages in Zimbabwe*. COMPAS Magazine for Endogenous Development: Ancient Visions and New Challenges. No 4. K. Vant Hooft, B. Haverkort and W. Hiemstra (Eds.).
- Norberg-Hodge, H., 2005. *Discussing Cross Cultural Images and Local Economies*. COMPASS No. 8, pp: 8-13.
- Udoh, J.A., 1999. *Agricultural Extension Development and Administration* KATZNS Publishers Ltd Nigeria.