PROBIT ANALYSIS OF FACTORS INFLUENCING RURAL EMPLOYMENT PROMOTION IN SOUTHERN NIGERIA

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Abstract: *Purpose* – Poverty, inequality and unemployment challenges need to be adequately addressed if sustainable human development is to be achieved. Although these key issues are not mutually exclusive, the thrust of this paper is to identify factors influencing rural employment promotion (REP) in southern Nigeria.

Design/methodology/approach – A multi-stage sampling procedure was used to select 60 rural communities in southern Nigeria. In all, 300 interviewees were sampled and interviewed using structured and unstructured interview schedules. Descriptive statistical techniques such as frequency, percentage, mean and standard deviation, were used to describe and summarise the data. *Probit* analysis was employed to make deductions through the use of the *STATA* package.

Findings – Results showed a Pseudo R^2 value of 0.3581, which is quite reasonable for qualitative dependent variable models. At $P \leq 0.01$ level of significance, education ($z = 2.02$), farm size ($z = 2.39$) positively influenced the drive towards rural employment generation. In addition, at $P \leq 0.01$ level, the availability of banking institutions ($z = 1.94$) and support from the family members ($z = 2.17$) strongly predicted REP. Other predictors of REP were the disaggregated units of project type/orientation, which are production ($z = 1.67$) and service-oriented ventures ($z = 1.98$) and they both had strong and positive influence on REP at $P \leq 0.05$ and 0.01 levels of significance, respectively.

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Research limitations – The research only focused on south-western Nigeria. Other geo-political and ecological zones in the country would need future research exploration to allow for a country-level generalisation of findings on rural employment.

Practical implications – The findings of the study have practical implications for future employment initiative/project implementation in Nigeria and in similar socio-ecological contexts elsewhere. They serve as a baseline on which future research and development work could rely.

Social implications – The information generated in the study could serve as working tools for pro-poor policy conceptualisation, formulation and implementation in developing economies and probably elsewhere. If genuinely implemented, it could enhance rural peoples' well-being and quality of life.

Originality/value – As original research, this study offers new insights into crucial issues that influence rural employment promotion in Nigeria and probably elsewhere within similar [socio-cultural, ecological, political and economic] contexts in the South.

Keywords: *Rural employment, Poverty, Socio-economic, Ecology, Infrastructure, Policy, Probit, Nigeria.*

Paper type Research paper

INTRODUCTION

Without doubt, a positive association exists between people's economic well-being and gainful employment. Well over 75.0 per cent of the world's poor are resident in rural areas and the prevalence of poverty in developing economies is more apparent in rural areas than in the cities (ILO, 2008). Alleviating [rural] poverty would, therefore, mean placing premium attention on investment opportunities that would induce entrepreneurship development for job creation and sustainable livelihood (ILO, 2008; Chen *et al.*, 2004; ILO, 2003). This suggests that appropriate policy instruments are needed to enhance better implementation of rural employment programmes. Indeed, national governments are beginning to shift attention to the crucial role of employment in the development process (Chen *et al.*, 2004). Highlighting the main goals of employment, Heneman and Yoder (1965) affirm that "[o]ur expectations for work are inseparable from the whole complex of our social, political and economic objectives". Expectedly, employment provides economic support for people and their families; satisfies many of people's personal needs for expression and recognition; and complements and facilitates political democracy, participation in self-government, and attainment of other political, social and ethical ideals. It is also expected that many of people's highly regarded personal and social goals would be realised through employment. Indeed, the employment process is seen as "central and essential" to and for labour economics and labour problems. Primarily, the thrust of labour economics is the efficient galvanization of both human and material resources with a view to providing products and services. Thus, employment is conceived as the means by which human resources are applied and made useful and valuable through their combination with other factors in providing goods and services that people want and will buy (Heneman and Yoder, 1965).

Small and medium scale enterprises (SMEs) are said to enhance the creation of new employment. Statistical evidence shows that firm size and investment per job are positively correlated but not necessarily causal (de Vries, 1979). In other words, the scope of any entrepreneurial venture would determine the investment on labour. To enhance rapid rural employment, a combination of policies that favour agricultural development as well as off-farm activities might prove a formidable approach to rural development (see for instance, World Bank 2008). Elsewhere, de Vries (1979) asserts that "SMEs are essential for the sound development of the industrial sector…,

innovation, entrepreneurship, more equitable income distribution and the growth of manufacturing production outside the main centers". The International Bank for Reconstruction and Development (IBRD) affirms that small scale enterprises (SSEs) are generally more labour-intensive than larger organisations (World Bank, 1978). Thus, SSEs are more effective vehicles for the creation of employment because they use simpler technology and are less capital intensive (de Vries, 1979). The ILO (1964) proposed, amongst others, that countries where there is much rural underemployment should place special emphasis on a broadly-based programme to promote productive employment in the rural sector. As such, the promotion of employment could be enhanced through a combination of institutional and technical measures, which rely mainly on the efforts of stakeholders; the creation of an enabling social and environmental conditions that encourage the use of local manpower in rural development with the aim of improving productivity and quality of output; and devoting "…[s]pecial attention to the need for promoting opportunities for productive employment in agriculture and animal husbandry" (ILO, 1964). Other authors have also supported this viewpoint (see for instance, Nkurunziza, 2006; Kolawole, 2002; Kolawole and Ajayi, 2005; Kolawole and Torimiro, 2005). Four decades down the line, the extent to which these proposals have been achieved, however, remains debatable. As such, this paper seeks to identify some of the predictors of rural employment and their associated problems.

The article describes and analyses the socio-economic characteristics of rural women and men, which influence employment promotion in southern Nigeria; describes the project orientations/types in the study area; identifies the problems associated with rural employment promotion in the area; and determines the predictors of rural employment promotion in the study area.

METHODOLOGY

A multi-stage sampling procedure was used to select 60 rural communities in southern Nigeria. Three states (*Ebonyi*, *Ekiti* and Rivers), which constitute 25.0 per cent of the 17 states in southern Nigeria were purposively selected based on the diverse ecology of the region. In addition, 25.0 per cent of the rural Local Government Areas (LGAs) was randomly selected. From the selected LGAs in each of the states, 20 rural communities were proportionately and purposively selected for the

survey exercise, based on the number of communities in each LGA and the "ruralness" of such communities, respectively. Some 100 respondents were, therefore, proportionately sampled from the 20 communities in each of the states, in relation to the population of each selected community. In all, 300 rural people were sampled and interviewed using structured and unstructured interview schedules [measuring both quantitative and qualitative data]. Test-retest method was employed in determining the consistency/reliability of the instrument.

Using the *STATA* package, the *Probit* model was employed to determine the predictor variables of REP. A binary dependent (dummy) variable (Y) was used in the *Probit* model (see for instance, Hosmer and Lemeshow, 2000; Kerlinger and Lee, 2000; Long, 1997):

$$\text{Log}\ (P/1 - P) = b_0 + bi\ X_{1\text{-}21}$$

Where
bi ($i = 0 \ldots 21$) are coefficients, and
Log ($P/1 – P$) = log ratio of rural employment promotion drive (Y) of an individual relative to a person who does not have that kind of drive.

Y = Rural employment promotion (REP) (A respondent was coded 1 if he or she had (a) private investment(s) that employed people. If otherwise, he was coded 0);
$X_{1\ldots18}$ = Non-dummy variables
X_{19} = Production-oriented venture dummy (D=1 if production, 0 if otherwise);
X_{20} = Service-oriented venture (D=1 if service, 0 if otherwise); and
X_{21} = Both production and service (D=1 if both, 0 if otherwise)

The dependent variable (Y) was measured by determining whether the respondents employed a worker(s) or not. All other independent variables (Xs) were either scored or coded depending on whether they are nominal or non-nominal variables, respectively. For instance, a respondent who was aged 50 years was scored 50 points for the age variable. A male respondent was coded as 1 while a female respondent was coded as 0, etc. Some qualitative data were converted to quantitative data based on certain criteria. For example, a respondent who had access to different sources of information was scored based on the number of such sources from which he received relevant information.

RESULTS AND DISCUSSION

Demographic and socio-economic attributes of respondents

Data in Table 1 show the gender composition of respondents in *Ebonyi, Ekiti* and Rivers states, where interviewees comprise 56.0, 93.0 and 63.0 per cent of male respondents, respectively. Conversely, about 44.0, 7.0 and 37.0 per cent comprise the women in *Ebonyi, Ekiti* and Rivers states, respectively. Most respondents interviewed in the three states were married. The average number of household size in *Ebonyi* State was 7.61, while *Ekiti* and Rivers states had 7.95 and 6.63, respectively. The average age of respondents in *Ebonyi, Ekiti* and Rivers states was 45.22, 52.42 and 43.0 years, respectively. Education-wise, about 43.0 per cent of respondents in both *Ebonyi* and *Ekiti* states either completed secondary school or even had tertiary education, while in Rivers State, about 44.0 per cent of those sampled had secondary education just as 26.0 per cent of these acquired tertiary education. These respondents' levels of education may have had some positive effects on their productive ventures in the promotion of rural employment. The average levels of income (measured in Nigerian Naira, NGN[2]) of the rural people interviewed in *Ebonyi, Ekiti* and Rivers states were NGN 9, 700.00; NGN 14, 981.80; and NGN 13, 485.00 per month, respectively. Data in Table 1 also reveal that people in rural communities of *Ekiti* State had more contact with government agencies than any of the other two states. In *Ebonyi*, all the respondents (100.0%) had contact with the Ministry of Health, just as 81.0 per cent of the same set of respondents had contact with the National Directorate of Employment (NDE). This showed a sharp contrast in those of *Ekiti* and Rivers states, where 44.0 and 36.0 per cent of interviewees had contact with the NDE, respectively. The highest contact in *Ekiti* was, however, recorded against the Ministry of Agriculture, closely followed by the Agricultural Development Programme (ADP). In Rivers State, a substantial number of those sampled had contact with the Ministry of Commerce and Industry (56.0%), Ministry of Health (51.0%) and Petroleum Trust Fund (PTF) (50.0%).

Data in Table 2 indicate that rural people's belongingness to association and participation were very low in *Ebonyi, Ekiti* and Rivers states. Of all the rural associations identified (the Cooperative, Community Development Associations, CDAs, Village organisations, Trade unions, *Esusu* groups, and others), over and above 50.0 per cent

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[2]NGN 152.00 officially exchanges for USD $1.00 (as of 2011)

State /Variables	Ebonyi State Percentage	Ekiti State Percentage	Rivers State Percentage	N=100 Per State
Sex				
Male	56.0	93.0	63.0	
Female	44.0	7.0	37.0	
Total	100.0	100.0	100.0	
Marital status				
Single	23.0	2.0	33.0	
Married	70.0	97.0	60.0	
Separated/Divorced	-	-	1.0	
Widowed/widower	7	1	6.0	
Total	100.0	100.0	100.0	
Household size				
< 6 people	48.0	23.0	44.0	
6 – 10	28.0	55.0	29.0	
11 – 15	10.0	20.0	26.0	
16 and above	14.0	2.0	1.0	
Total	100.0	100.0	100.0	
Mean:	7.61	7.95	6.63	
Std. Dev.:	6.52	3.37	4.91	
Age				
20 – 40	41.0	21.0	42.0	
41 – 60	44.0	52.0	47.0	
61 – 80	15.0	27.0	11.0	
Total	100.0	100.0	100.0	
Mean:	45.22	52.42	43.0	
Std. Dev.:	15.23	12.23	14.27	
Education level				
No formal education	26.0	32.0	26.0	
Did not complete primary education	1.0	-	1.0	
Completed primary education	28.0	24.0	28.0	
Did not complete secondary education	1.0	1.0	-	
Completed secondary education	18.0	20.0	18.0	
Had tertiary education	25.0	23.0	26.0	
Income (N)/month				
No information	-	8.0	-	
< 7,500	48.0	21.0	43.0	
7,500 – 15,000	32.0	31.0	27.0	
15,001 – 22,500	15.0	20.0	8.0	
22,501 – 30,000	4.0	12.0	14.0	
> 30,000	1.0	8.0	8.0	
Total	100	100	100	
Mean:	9,700.00	14,981.80	13,485.00	
Std. Dev.:	7,311.26	11,041.03	12,931.00	
Contact with Govt. Agencies*				
i. Ministry of Agric. & Coop	12.0	98.0	-	
ii. Ministry of Rural Development.	9.0	86.0	-	
iii. Water Cooperation	17.0	87.0	1.0	
iv. Direct Labour Agency	2.0	11.0	-	
v. Min of youth, Social Development. & Women Affairs	5.0	49.0	3.0	
vi. Agric. Development. Programme	2.0	79.0	24.0	
vii. Ministry of Commerce and Industry	7.0	48.0	56.0	
viii. Petroleum Trust Fund (PTF)	7.0	54.0	50.0	
ix. Ministry of Health	100	70.0	51.0	
x. National Orientation Agency (NOA)	1.0	25.0	-	
xi. National Directorate of Employment (NDE)	81.0	44.0	36.0	
xii. Others	-	2.0	-	

*Multiple responses
Source: Field Survey

Table 1:
Demographic and socio-economic attributes of respondents

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State/Variables	Ebonyi State Percentage	Ekiti State Percentage	Rivers State Percentage
Association Membership/Participation*			
(a) Cooperative Society			
(i) Not a member	95.0	53.0	100.0
(ii) Ordinary member	1.0	38.0	-
(iii) Committee member	-	8.0	-
(iv) Executive member	4.0	1.0	-
(b) Community Development Asso. (CDA)			
(i) Not a member	100.0	98.0	100.0
(ii) Ordinary member	-	-	-
(iii) Committee member	-	1.0	-
(iv) Executive member	-	1.0	-
(c) Village organization			
(i) Not a member	47.0	77.0	77.0
(ii) Ordinary member	31.0	15.0	21.0
(iii) Committee member	16.0	4.0	2.0
(iv) Executive member	6.0	4.0	-
(d) Trade unions			
(i) Not a member	94.0	94.0	71.0
(ii) Ordinary member	5.0	4.0	25.0
(iii) Committee member	1.0	-	4.0
(iv) Executive member	-	2.0	-
(e) *Esusu* Group			
(i) Not a member	100.0	91.0	85.0
(ii) Ordinary member	-	8.0	11.0
(iii) Committee member	-	1.0	4.0
(iv) Executive member	-	-	-
(f) Others			
(i) Not a member	53.0	98.0	58.0
(ii) Ordinary member	39.0	2.0	41.0
(iii) Committee member	7.0	-	1.0
(iv) Executive member	1.0	-	-
Sources of information*			
(i) ADP	12.0	94.0	-
(ii) Dept of Fisheries	-	12.0	3.0
(iii) NOA	6.0	46.0	4.0
(iv) Friends and neighbours	100.0	98.0	100.0
(v) Market forums	100.0	77.0	100.0
(vi) Television	26.0	44.0	42.0
(vii) Newspapers	33.0	14.0	32.0
(viii) Magazines	23.0	6.0	18.0
(ix) Radio	94.0	73.0	99.0
Occupation*			
(i) Farming	72.0	100.0	38.0
(ii) Fishing	-	4.0	16.0
(iii) Trading	46.0	18.0	10.0
(iv) Artisan	2.0	11.0	6.0
(v) Civil service	17.0	23.0	24.0
(vi) Transportation business	4.0	-	20.0
(vii) Agro-allied processing	8.0	2.0	11.0
Farm size (ha)			
0 – 5.0	79.0	66.0	99.0
5.1 – 10.0	20.0	28.0	1.0
10.1 – 15.0	1.0	3.0	-
15.1 – 20.0	-	3.0	-
Total	**100.0**	**100.0**	**100**
Mean:	2.80	5.10	1.43
Std. Dev.:	2.74	3.98	1.82
Cosmopoliteness			
(i) I never travelled out of my locality	1.0	-	4.0
(ii) I have travelled to other villages in my locality	1.0	1.0	40.0
(iii) I have travelled to other towns within the state	22.0	75.0	40.0
(iv) I have travelled to other towns outside the state	75.0	22.0	14.0
(v) I have travelled to other countries	1.0	2.0	2.0
Total	**100.0**	**100.0**	**100**

*Multiple responses
Source: Field survey

Table 2:
Demographic and
socio-economic
attributes

of respondents never belonged to any of such groupings in all three states. Where they belonged at all, they never participated fully; rather, very small numbers were committee or executive members. While most respondents in *Ebonyi* State had more access to information through friends and neighbours and market fora (100.0%), and radio (94.0%), those sampled in *Ekiti* State had more access to information through friends and neighbours (98.0%), ADPs (94.0%), market forums (77.0%), radio (73.0%) and television (44.0%). Friends and neighbours and market forums (100.0%), radio (99.0%), television (42.0%) and newspapers (32.0%) were major sources of information for the ruralites in Rivers State.

In terms of occupation, farming was rated as having the highest occurrence in rural *Ebonyi* (72.0%), *Ekiti* (100.0%) and Rivers (38.0%). Trading (46.0%) and civil service (17.0%) followed farming, in that order, in *Ebonyi* State. However, civil service (24.0%) and transportation business (20.0%) were relatively more prominent in the rural communities of Rivers State after farming. This may not have been unconnected with the cosmopolitan nature of the state in general, as a result of oil exploration. The average farm size was 2.80, 5.10 and 1.43 hectare in *Ebonyi*, *Ekiti* and Rivers states, respectively. It could then be deduced that farming activities were more common in *Ekiti* as compared with the other two states, particularly Rivers, where it is popularly acclaimed that oil exploration seemed to have damaged its ecology. In terms of respondents' outside orientation, interviewees (75.0%) in *Ebonyi* State were more cosmopolitan than their counterparts in either *Ekiti* or Rivers, where only 22.0 and 14.0 per cent "had travelled to other towns outside the state", respectively. Only 2.0 per cent of respondents had ever "…travelled to other countries" from *Ekiti* and Rivers states, respectively.

Respondents' community endowment and infrastructural features

The natural resources and social amenities and infrastructure in the study area are described in this section. Only 13.0 per cent of the respondents in Rivers State acknowledged that their communities were situated along the coastline (littoral). While *Ekiti* is "forest endowed" and situated within the hinterland (100.0 %), Rivers State was said to have "*riverine and mangrove features*" (57.0 %). *Ebonyi* was, from another perspective, said to have been associated with "both forest and grassland" (100.0 %). The average number of motorable roads in the rural communities of

Ebonyi, *Ekiti* and Rivers was 4.41, 4.07 and 4.07, respectively. The rural roads were either not tarred or tarred in all the three states sampled. Data also indicated that most rural people in the states sampled had more access to borehole, well and streams/brook water for household use than water supplied by the Water Corporation. In any case, the situation was pathetic in *Ekiti* state, where only 1.0 per cent of the respondents agreed that their community enjoyed the services of the Water Corporation. Electricity supply (through the Power Holding Company of Nigeria, PHCN PLC) in *Ekiti* was, however, better than in the other two states. Whereas most rural communities in *Ebonyi* had open air and open stalls market facilities, *Ekiti* rural communities had more access to open and lock-up stalls. As for Rivers, its rural communities had access to all three categories of market facilities. Most rural communities in *Ebonyi* had no access to either a Postal Agency or Post Office just as about 79.0 per cent of the respondents in *Ekiti* state said that their communities had a functional Post Office/postal agency. Only about 37.0 per cent of those sampled in Rivers State said that their communities had functional Post Office/postal agency. Available data also showed that most rural communities in the three states never had direct/immediate access to the services of banks. While only 31.0 per cent of respondents in Rivers claimed that their communities enjoyed the services of *Afribank* Plc, 21.0, 28.0 and 27.0 per cent of those sampled in *Ekiti* state admitted that their communities had First Bank, Community Bank and Co-operative Bank, respectively. Only 17.0 and 12.0 per cent of the respondents in *Ebonyi* acknowledged that their communities enjoyed the services of First Bank and Union Bank, respectively. In terms of Medicare facilities, about 80.0, 73.0 and 35.0 per cent of respondents in the countryside had access to maternity homes in *Ebonyi*, *Ekiti* and Rivers states. Only in Rivers State did a relatively substantial number of respondents (37.0 %) claim they had access to the services of a general hospital. The majority of people sampled in Rivers (51.0 %), however, claimed they had access to rural health centers as compared with the 37.0 and 29.0 per cent recorded for both *Ebonyi* and *Ekiti* states, respectively.

Project type and orientation

Data in Table 3 describe the orientation of projects, the capital outlay involved, appropriateness of projects to the locality and the number of people employed in or by such projects. Analysis showed that business ventures in *Ekiti* (53.0%) and Rivers (65.0) were production-based. However, both service and production were the thrusts of projects/

State/Variables	Ebonyi State Percentage	Ekiti State Percentage	Rivers State Percentage
Orientation of projects			
(i) Production based	27.0	53.0	65.0
(ii) Serviced based	23.0	1.0	16.0
(iii) Both	50.0	46.0	19.0
Total	**100.0**	**100.0**	**100.0**
Capital outlay required			
(i) Small (<N10,000:00)	81.0	72.0	88.0
(ii) Moderate (N10,000-N40,000)	18.0	27.0	12.0
(iii) High (>N40,000)	1.0	1.0	-
Total	**100**	**100.0**	**100**
Appropriateness of project			
(i) Project is appropriate to the locality	97.0	99.0	94.0
(ii) Project is not appropriate because raw materials are not available	-	1.0	1.0
(iii) Project is not appropriate because of the dearth of labour	1.0	-	-
(iv) Project is not appropriate because of unavailability of market	1.0	-	4.0
(v) Project is not appropriate because of two or all the above reasons	1.0	-	1.0
Total	**100.0**	**100.0**	**100.0**
Numbers of employees			
(i) None	44.0	39.0	67.0
(ii) Between 1-5	43.0	58.0	29.0
(iii) Between 6-10	13.0	1.0	4.0
(iv) Between 11-15	-	2.0	-
Total	**100.0**	**100.0**	**100.0**
Mean:	2.00	1.64	0.91
Std. Dev.:	2.33	2.38	1.68

Source: Field survey

Table 3:
Project type and orientation

businesses in the rural communities of *Ebonyi* State. A substantial percentage also (46.0%) combined service and production in *Ekiti* State.

Most respondents in *Ebonyi* (81.0%), *Ekiti* (72.0%) and Rivers (88.0%) claimed that their project had a small capital outlay. Only about 27.0 per cent of the people said their capital outlay was moderate. The majority of those interviewed in *Ebonyi* (97.0%), *Ekiti* (99.0%) and Rivers (94.0%) claimed that their "[p]roject is appropriate to the locality". While only about 5.0 per cent saw lack of market, labour and raw materials as impediments to the appropriateness of projects in rural communities of Rivers State, about 3.0 per cent in *Ebonyi* State had the same perception. The average number of people employed by rural entrepreneurs in *Ebonyi*, *Ekiti* and Rivers states was 2.00, 1.64 and 0.91, respectively.

The small number of people employed in rural ventures in Rivers State supports the earlier claim that government did not fund employment generating projects at both individual and group levels.

Envisaged profitable, employment generating ventures and constraints

Analysis also showed that most respondents in *Ebonyi* (67.0%) and *Ekiti* (100.0%) states felt agro-allied processing was likely to ignite rural entrepreneurship and employment promotion. Production of household essential needs (such as candles, soap, pomade etc.) was perceived as profitable in both states. However, about 20.0, 35.0 and 38.0 per cent of respondents in Rivers also felt the transportation business, agro-allied processing, and production of household essential needs were also profitable. From another vantage point, about 11.0 per cent of those interviewed in both *Ebonyi* and Rivers states believed trading was worthwhile. Most respondents in all the states, however, affirmed that lack of funds, ill health and acute shortage of land were major constraints to rural entrepreneurship and the employment promotion drive.

REP Probit model and regression results

The basic model for rural employment promotion is:

$$\text{Log}\,(P/1 - P) = b_0 + b_1\,\text{HOUSEHOLD} + b_2\,\text{AGE} + b_3\,\text{EDUCATION} + b_4\,\text{INCOME} + b_5\,\text{COSMO.}\;\ldots\text{etc.}$$

Where
bi ($i = 0 \ldots 21$) are coefficients, and
Log ($P/1 - P$) = log ratio of rural employment promotion drive of an
individual relative to a person who does not have
that kind of drive.

Results of the regression of the REP model are summarized in
Table 4. The value of the Pseudo R^2 is 0.3581, which is quite reasonable
for qualitative dependent variable models. In addition, the computed
likelihood ratio (LR) value, which is 148.92, is quite larger than the
critical value of the Chi-squared statistic with 298 degree of freedom
at 1.0 per cent level (i.e. 50.89). This, therefore, suggests that the null
hypothesis, that all parameter coefficients (except the intercept) are all
zeros, is strongly unacceptable. This shows that the model is significant
at 1.0 per cent level.

Household size and age, although not significant in the model, were
seen to have had a positive impact on an individual's drive towards REP.
The larger the household size, the more likely they would contribute to
the workforce. Indeed, the positive relationship of age with REP is not
unexpected, as experience and maturity on business and commercial
activities could be influenced by age. However, education is hypothesised
to positively influence the drive towards employment generation. It could
be deduced that the relatively high coefficient of education variable
in the model points to the fact that education is a strong predictor of
rural employment promotion/generation. This is to the extent that
an individual who is well educated is better placed and empowered to
appropriate resources at his/her disposal more effectively than a person
who does not have education. The negative but insignificant influence
of *cosmopoliteness* on REP could be explained on the grounds that an
individual who is prone to too much external orientation without much
emphasis on seeking the right information or acquiring new knowledge
about the art of business may not be likely to promote rural employment.
This is supported by the negative influence of information on the same. If
an individual does not have the right information necessary for business
development, s/he is less likely to initiate employment generating ventures,
since incorrect information, when applied in particular situations, could
engender business failure (as it does in farming). Association membership
and contact with government agencies had some degree of positive
influence on the employment promotion drive of the local entrepreneur.
This implies that belonging to some social groupings and having contact

Variables	Coefficients	Standard errors	Z-ratios	P≥|z|	
Household size	0.02	0.029	0.59	0.554	**Probit analysis**
Age	-0.00	0.009	0.25	0.802	**of factors**
Education	0.04	0.022	2.02**	0.044	**influencing rural**
Income	0.00	0.000	0.01	0.995	**employment**
Cosmopoliteness	-0.05	0.031	-1.51	0.132	**promotion in**
Contact with govt. agencies	0.03	0.054	0.62	0.538	**southern Nigeria**
Association membership	0.14	0.095	1.46	0.144	**550**
Information source(s)	-0.04	0.082	-0.53	0.597	
Farm size	0.09	0.039	2.39**	0.017	
Soil type	0.24	0.304	0.80	0.424	
Rainfall pattern	0.00	0.281	0.01	0.989	
Source of water supply	-0.05	0.043	-1.05	0.295	
Source(s) of electricity	0.16	0.128	1.29	0.198	
Banking facilities	0.20	0.102	1.94**	0.053	
Government support	0.03	0.103	0.29	0.771	
Family support	0.13	0.060	2.17**	0.030	
Motorable road(s)	0.23	0.257	0.91	0.361	
Community support	0.05	0.070	0.67	0.502	
Production-oriented	0.99	0.589	1.67*	0.094	
Service-oriented	1.25	0.632	1.98**	0.048	
Both prod. & service	0.49	0.606	0.80	0.423	
Constant	-1.02	2.273	-0.45	0.653	

Source: Field survey

Probit estimates:
Iteration 0: log likelihood = -207.93749
Iteration 1: log likelihood = -138.36428
Iteration 2: log likelihood = -133.63138
Iteration 3: log likelihood = -133.47737
Iteration 4: log likelihood = -133.47706
Iteration 5: log likelihood = -133.47706
**z and *z significant at P≤ 0.05 and 0.10 levels, respectively

Number of observation = 300
LR chi2 (21)   = 148.92
Probability > chi2   = 0.0000
Pseudo R2   = 0.3581
Log likelihood   = -133.47706

Table 4:
Estimated Probit model results of factors affecting rural employment promotion in southern Nigeria

with people in government circles could help strengthen a person's drive towards rural employment generation. The positive and strong influence of farm size on REP suggests that when a farm holder puts a large proportion of land into agricultural production, it is more likely for him/her to promote rural employment, as he/she will seek the services of more employees. Consequently, farm size is also a strong predictor of REP. As claimed, agriculture is said to be the largest employer of sub-Saharan African youth (ILO, 2008, p. 29). The availability of banking institutions also predicts REP. This is as a result of the likelihood that banks are sources of funding for the rural entrepreneur either by enabling him/her to start or expand his/her business scope. Another predictor of REP, which is also relatively strong, is the support from family members. This tends to support the earlier claim that a large household size might contribute positively to the entrepreneurial drive of an individual via providing moral and physical support. The disaggregated units of project type/orientation, which are production and service-oriented ventures, had strong and positive influence on REP in southern Nigeria. However, the result of the *Probit* analysis showed a positive but not significant association with the combination of production and service-oriented business in the area, perhaps as a result of the low level of divestment among rural entrepreneurs in the study area.

Conclusion and recommendations

This paper described and analysed the socio-economic characteristics (of rural women and men), which influence employment promotion in southern Nigeria. Descriptions of the project orientations/types have been made. Some problems associated with rural employment promotion were identified and the predictors of rural employment promotion in the region were also determined. Regardless of the strategies adopted to bring about economic growth, environmental protection and effective resource management, the optimal engagement or inclusion of poor people in productive activities will always be a vital factor in the process of achieving meaningful success in the development process. Acknowledging that one convincing pathway to rural poverty alleviation is through employment promotion (Chen *et al.*, 2004), this paper has thus identified some factors that influence the enhancement of rural employment promotion in southern Nigeria.

Unlike *Ebonyi* State, where both service and production were the thrusts of projects/businesses in the rural communities, the business

ventures in *Ekiti* and Rivers were mainly production-based. Most of the respondents sampled claimed that their projects had a small capital outlay, which employed an average of between one and two employees per enterprise. This showed the low level of rural employment promotion in the region. However, agro-allied processing and production of household essential needs were perceived by rural people as profitable in southern Nigeria. Most respondents in all the states, however, affirmed that lack of funds, ill health and acute shortage of land were major constraints to rural entrepreneurship and any employment promotion drive.

The *Probit* analysis suggested that education, farm size, availability of banking institutions, family support, production and service-oriented business ventures were the predictors of REP in southern Nigeria. As such, national governments need to domesticate and implement global policy instruments (such as the Global Employment Agenda, GEA) to accelerate rural employment. Where the economy is predominantly agrarian, particular attention needs to be placed on on-farm and off-farm employment activities. Based on the findings in the study, the following policy recommendations are made:

- Appropriate projects, which are self-sustaining, need to be identified for particular localities as reflected in this study to ensure economies of scale and continuity of operations. The important roles of the grassroots people in decision-making are considered crucial here.

- Nigeria's economy (like most developing countries) is agrarian. Most rural communities in southern Nigeria are, therefore, better positioned for agro-allied production ventures. Hence, specific agro-based projects (such as value addition or food processing firms) would be appropriate for specific localities.

- Provision of basic and functional services such as education (literacy programmes), healthcare, water, electricity and motorable roads are vital for the REP drive in rural communities.

- Issues on land acquisition for production ventures would need special attention.

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REFERENCES

Chen, M.A., Vanek, J. and Carr, M. (2004), *Mainstreaming informal employment and gender in poverty reduction: A handbook for policy-makers and other stakeholders*. Commonwealth Secretariat, London, p. 118.

de Vries, B.A. (1979), "Industrialization and employment: The role of small and medium sized manufacturing firms", *World Bank Reprint Series*, Vol. 116, pp. 47-62.

Heneman, H.G. and Yoder D. (1965), *Labour Economics,* South-western Publishing Company, Cincinnati.

Hosmer, D. and Lemeshow, S. (2000), *Applied logistic regression* (second edition), John Wiley & Sons, Inc New York.

International Labour Office, (2008), Promotion of rural employment for poverty reduction, *Report IV, International Labour Conference, 97th Session.* Geneva: ILO, p. 11.

International Labour Office, (2003), Scope of employment relationship. *Report IV, International Labour Conference, 91ˢᵗ Session.* Geneva: ILO.

International Labour Organization, (1964), Employment policy: Recommendation. *The 48ᵗʰ session of the General Conference of the International Labour Organization (ILO).* 17 June. Geneva: ILO.

Kerlinger, F.N. and Lee, H.B. (2000), *Foundations of behavioral research* (fourth edition), Cengage Learning, Beimont, CA.

Kolawole, O.D. (2002), "Crucial factors associated with participatory rural employment promotion in some selected communities of Lagos State", *Technical Report*, Lagos: Centre for Rural Development, State Government, 1-57.

Kolawole, O.D. and Ajayi A.O. (2005), "Entrepreneurship development and employment promotion for poverty reduction in rural communities of Lagos State, Nigeria", *Nigerian Journal of Rural Sociology*, Vol. 5 Nos. 1 & 2, pp. 92-99.

Kolawole, O.D. and Torimiro D.O. (2005), "Participatory rural entrepreneurship development for grassroots transformation: A factor analysis", *Journal of Human Ecology*, Vol. 18 No. 3, pp. 193-198.

Long, J.S. (1997), *Regression models for categorical and limited dependent variables*. Sage Publications, Thousand Oaks, CA.

Nkurunziza, J.D. (2006), "Generating rural employment in Africa to fight poverty", *Paper presented at ECOSOC's High-Level Segment*, New York, 9 May, 1-2.

World Bank, (2008), *World Development Report 2008*, The World Bank, Washington DC.

World Bank, (1978), Employment and development of small enterprises. *Sector Policy Paper*, The World Bank, Washington DC, 1-93.

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