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NSSP Workshop Report # 6

Poverty and Nutrition Policy Analysis: Using SPSS for Survey Data Analysis

Nigeria Strategy Support Program (NSSP)
Workshop Report No. NSSP 006

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IFPRI-Abuja

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THE NIGERIA STRATEGY SUPPORT PROGRAM (NSSP)

BACKGROUND PAPERS

ABOUT NSSP/APSF

The Agricultural Policy Support Facility (APSF) is an initiative to strengthen evidence-based policymaking in Nigeria in the areas of rural and agricultural development. Facilitated by the **Nigeria Strategy Support Program of the International Food Policy Research Institute (IFPRI)** in collaboration with the Federal Ministry of Agriculture and Water Resources and funded by the Canadian International Development Agency, APSF supports the implementation of Nigeria's national development plans by strengthening agricultural-sector policies and strategies through:

Enhanced knowledge, information, data, and tools for the analysis, design, and implementation of pro-poor, gender-sensitive, and environmentally sustainable agricultural and rural development policies and strategies in Nigeria;

Strengthened capacity for government agencies, research institutions, and other stakeholders to carry out and use applied research that directly informs agricultural and rural policies and strategies; and

Improved communication linkages and consultations between policymakers, policy analysts, and policy beneficiaries on agricultural and rural development policy issues.

ABOUT THESE BACKGROUND PAPERS

The Nigeria Strategy Support Program (NSSP) Background Papers contain preliminary material and research results from IFPRI and/or its partners in Nigeria. The papers have not been subject to a formal peer review. They are circulated in order to stimulate discussion and critical comment. The opinions are those of the authors and do not necessarily reflect those of their home institutions or supporting organizations.

**Poverty and Nutrition Policy Analysis:
Using SPSS for Survey Data Analysis**

Abuja, Nigeria
October 6-9, 2008¹

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Introduction

Poverty and malnutrition in Nigeria are widespread and severe, and therefore continue to be at the center stage of the development discourse. Sixty-four percent of all rural Nigerians have a consumption level below the basic-needs poverty line, while 43 percent of rural children under five years of age are stunted in their growth. Thus, many rural Nigerians live under conditions of extreme vulnerability, both economically and physically, with quite limited abilities to cope with shocks and safeguard their current level of well-being.

Government efforts at reducing poverty and malnutrition have culminated into numerous programs. Prominent among them are:

National Poverty Eradication Programme (NAPEP),
National Economic Empowerment and Development Strategy (NEEDS), and
Millennium Development Goals (MDG).

While these programs are desirable, their outcomes have been mixed. If Nigeria is to achieve the first MDG of reductions in poverty, hunger, and malnutrition, and the fourth MDG of reducing child mortality, a clear understanding of the defining characteristics of the poor and malnourished, the dimensions of poverty and malnutrition, and the determinants of such poverty and malnutrition are required for more sustainable policy actions. More so, programs that aim to reduce poverty and malnutrition can only be more effective if quantitative and qualitative poverty and nutrition analysis and statistics are the basis of their design.

During the planning of the Agricultural Policy Support Facility (APSF) program in Nigeria, consultations with the Federal Ministry of Agriculture and Water Resources (FMAWR) and other stakeholders identified the need to build and strengthen capacities of ministries, departments and agencies (MDAS) in poverty and nutrition policy research and analysis. This need is premised on the fact that competent planners and policy analysis experts are essential for sound and effective policy analysis and planning. To assist in ensuring that the poverty and nutrition policies and programs are supported by appropriate analysis, APSF, in collaboration with the National Bureau of Statistics, organized a 4-day training course on Poverty and Nutrition Policy Analysis, from October 6-9, 2008 at the National Bureau of Statistics' training room. The content of the course was based on a needs assessment survey carried out earlier among the potential participants. The training hosted 24 participants from the Federal Ministry of Agriculture and Water Resources, the Federal Ministry of Health, the National Planning Commission, the National Bureau of Statistics, and research institutes and universities (see Appendix A for the list of participants).

The objective of the training course was to:

Strengthen existing capacity across sectoral ministries and agencies in data analysis, specifically poverty and nutrition policy analysis;
Expand the knowledge base for developing agricultural, rural development, poverty, and nutrition related policies and programs;
Enable the development of advanced computing skills; and
Reinforce international best practices in poverty and nutrition analysis.

Welcome Remarks

The training began with an opening prayer by Mrs. Adepoju Abimbola, Assistant Lecturer, Department of Agricultural Economics, University of Ibadan. Thereafter, the training was declared opened by Dr. George Adewoye, Director of Census and Surveys, on behalf of the Director General, National Bureau of Statistics, Dr. V.O. Akinyosoye. Welcome addresses were given by Mr. A. O Fadare, Deputy Director, Department of Policy, Planning Analysis, and Statistics, FMAWR, and Ms. Valerie Rhoe, Program Coordinator, Nigeria Strategy Support Program (see Appendix B for the agenda).

All the welcome remarks stressed the importance of sound data analysis for effective policy action against poverty reduction, malnutrition, and food insecurity. The welcome remarks also encouraged participants to take the training very seriously by participating actively and using the knowledge gained on their job. In addition, the remarks touched on the relevance of the training to the Nigerian situation where poverty and malnutrition--a twin global development issue--are major development challenges.

Program Content

The training module introduced participants to poverty and nutrition analysis and provided basic skills for data management and policy analysis. The Special Package for Social Science (SPSS) software and the existing 2003 Nigeria Demography and Health Survey (NDHS) and 2004 National Living Standard Survey (NLSS) data were employed for the training. The training consisted of lectures and in-class practice exercises, and was essentially based on the use of command syntax. In addition, the normal "click command" was also taught.

The first two days of the training were devoted to training participants how to prepare data files for analysis, and covered such topics as getting data into SPSS from other SPSS and non-SPSS spreadsheet applications, data documentation, data transformation (generating new variables), cleaning data, aggregating and adding files, merging files, and creating composite variables. All of these topics are prerequisites for good data analysis.

The last two days featured basic data analysis techniques comprising frequency distribution, measures of central tendency and location, relationship between variables (correlation), and causes and effects among different variables. The topics covered included developing a tabulation plan (in response to research questions), descriptive analysis, t-tests, correlations, crosstabs, poverty analysis, nutrition analysis, and regression analysis.

The poverty head count measure was employed to estimate poverty among Nigerians using the NLSS 2004 data. Other methods, such as the cost of basic needs, were also discussed. While it is clear that knowing the number of people in poverty may be necessary but not sufficient to guide policy planning for poverty reduction, participants were also introduced to methods to recognize the depth and severity of poverty. Regression analysis was used to estimate the determinants or causes of poverty among the poor population.

The nutrition analysis used the standards set by the World Health Organization and the 2003 NDHS to teach participants how to estimate prevalence of stunting, wasting, and underweight among Nigerian children. The adult indicator of under nutrition (body mass index) was also calculated for mothers, and its relationship with stunting, wasting, and underweight of children was explored using regression analysis.

The training emphasized the importance of feminizing poverty and nutrition analysis to ensure that policy action captures the gender dimensions of poverty and nutrition in Nigeria. The need to feminize poverty and nutrition analysis is based on the understanding from research efforts that policy action affects men and women differently and may explain the kind of results we have in Nigeria's quest to reduce poverty and malnutrition.

Observations

Capacity strengthening or human capital development is supposed to be a continuous exercise. The participants showed a high level of enthusiasm, dedication, and active participation throughout the training course. It is recommended that the participants be held accountable for the training received, and provided with a conducive atmosphere to practice what they have learned. We are also recommending that participants from the National Bureau of Statistics, the National Planning Commission, and FMAWR be challenged to produce a poverty policy report using the NLSS 2004.

Training Workshop Evaluation

The overall assessment of the training on Poverty and Nutrition Policy Analysis using SPSS was quite good (4.44 on average)², based on the high positive responses from the participants (see the evaluation chart in Appendix C). Four university lecturers, seven policy planners, two nutritionists, five statisticians, four programmers/analysts and one researcher attended this 4-day training workshop.

On average, the majority of the participants were satisfied, and agreed that the objectives of the training workshop were clear (4.63), relevant to their present individual job description (4.79), and fully covered by the instructors (4.21), although the concept of poverty and nutrition were new to some of the participants (see the evaluation questionnaire in Appendix D).

The contents of the training workshop were found by the participants to cover relevant (4.58) and adequate topics (4.12). The instructors used the recent national Living Standard Survey and Nigeria Demography and Health Survey to illustrate the poverty and nutrition situation in Nigeria. In addition, participants believed that the contents were presented clearly and in logical sequence.

Regarding the organization of the training workshop, most of the participants agreed that the training was well organized with adequate reading and teaching materials (4.47). Furthermore, the participants concurred that the training workshop introduced new skills. However, they noted that more time should have been spent on practicing such skills.

Admittedly, the training generated new thinking on poverty and nutrition policy analysis. The exercises taken during the training session, and the explicit explanation of policy implications of poverty and nutrition statistics by the instructors helped the participants to better understand the basic issues around the two concepts covered.

In sum, the participants enjoyed the various topics discussed, the exercises and activities covered, and the facility tour of the training venue. The information obtained through this training will help participants in their various ministries, agencies, department, universities, and research institutes.

² On a scale of 1-5 with 1 being the minimum and 5 the maximum, participants responded to some evaluation questions.

Next Steps

The training team will critically examine and follow through the recommendations from individual participants' evaluations of the training program to better re-package the training and improve on any area where lapses were observed.

Appendix A: Participants List

Surname	First Name	Designation	Institution	E-mail	Phone Number
Abugu	John O.	Principal Statistician	FMAWR ³	johnnetbiz@yahoo.com	08059606590
Adepoju	Abimbola Oluyemisi	Assistant Lecturer	University of Ibadan	yemisibaby@yahoo.com	08055430095
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Olarewaju	Isiaka Akanmu	Chief Statistician	NBS	ialarewaju@yahoo.com	08023360767
Omolehin	Raphael Adeniyi	Senior Lecturer	Ahmadu Bello Univ	raph201@yahoo.com	08036554983
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Sanni	Silifat Ajoke	Lecturer 1	Univ.of Agric, Abeokuta	silajok@yahoo.com	07035234820
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Ukpai	Ifeanyi	Senior Animal Health &	FMAWR	ezinne_207@yahoo.co	08035984257

³ Federal Ministry of Agriculture and Water Resources

⁴ National Bureau of Statistics

⁵ Federal Ministry of Health

⁵ National Root Crop Research Institute

⁶ National Planning Commission

Appendix B: Agenda

Monday October 6th

- 8:45 Registration
- 9:00-9:30 Introduction and Welcome Remarks by FMAWR, NBS, and IFPRI
- 9:30-10:30 General information about using SPSS
- 10: 45-11:00 Coffee break
- 11: 00-12:30 Data Documentation and transformation
- 1:30-3:00 Documenting data set
- 3:00-3:15 Coffee break
- 3:15-4:30 Generating new variables

Tuesday October 7th

- 9:00-10:45 Aggregating and adding files
- 10:45-11:00 Coffee break
- 11:00-12:30 Merging files
- 12:30-1:30 Lunch break
- 1:30-3:00 Creating composite variables (e.g. household expenditures)
- 3:00-3:15 Coffee break
- 3:15-4:30 Creating composite variables (cont.)

Wednesday October 8th

- 9:00-10:45 Developing a tabulation plan and descriptive analysis
- 10:45-11:00 Coffee break
- 11:00-12:30 Descriptive Analysis, generating tables, and mean tables
- 12:30-1:30 Lunch break
- 1:30-3:00 T-test
- 3:00- 3:15 Coffee break

3:15-4:30 Correlation analysis, crosstabs, Chi-square, Generating plots and graphs, and creating a master file for doing regression analysis.

Thursday October 9th

9:00-10:45 Poverty analysis

10:45-11:00 Coffee break

11:00- 12:30 Nutrition analysis

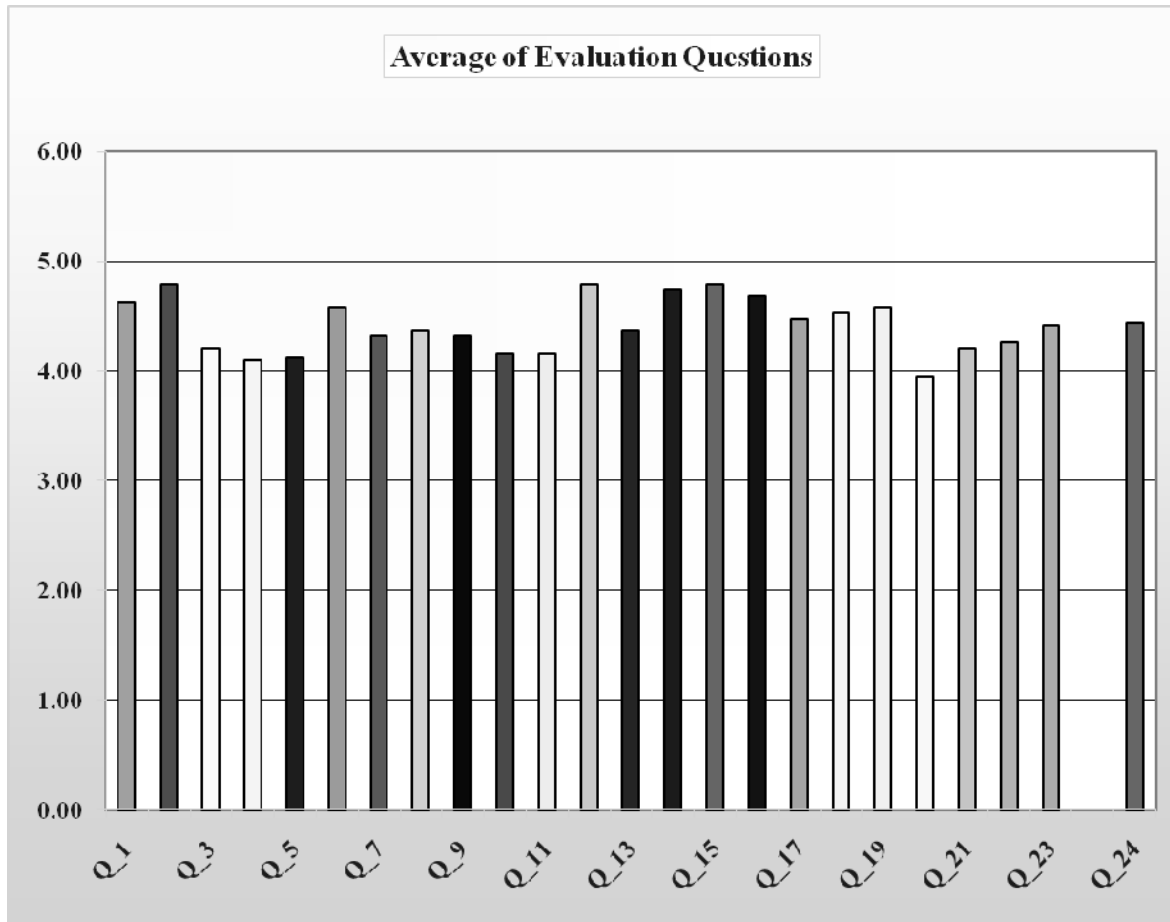
12:30-1:00 Lunch break

1:30-3:00 Regression analysis

3:00-3:15 Coffee break

3:15- 4:30 Answering questions, solving problems, evaluation, and wrapping up the training

Appendix C: Evaluation Chart



Appendix D: Evaluation Questionnaire

Please give your feedback on the objectives, contents, organization, and outcomes of the workshop

1=strongly disagree; 2=disagree; 3=not sure; 4=agree; 5=strongly agree

Objectives

- | | | | | | |
|---|---|---|---|---|---|
| 1. The objectives of the workshop were clear | 1 | 2 | 3 | 4 | 5 |
| 2. The workshop's objectives are relevant | 1 | 2 | 3 | 4 | 5 |
| 3. The objectives of the workshop were fully met | 1 | 2 | 3 | 4 | 5 |
| 4. The objectives of the workshop can be improved | 1 | 2 | 3 | 4 | 5 |
- Give specific example

Contents

- | | | | | | |
|---|---|---|---|---|---|
| 5. The workshop covered adequate topics on
Poverty and Nutrition Policy Analysis | 1 | 2 | 3 | 4 | 5 |
| 6. The contents of the workshop were relevant for the audience | 1 | 2 | 3 | 4 | 5 |
| 7. The contents of the workshop were presented clearly and in logical sequence | 1 | 2 | 3 | 4 | 5 |
| 8. The contents of the workshop were prepared well | 1 | 2 | 3 | 4 | 5 |
| 9. The contents of the workshop were presented well | 1 | 2 | 3 | 4 | 5 |
| 10. Adequate examples were used to illustrate the key points | 1 | 2 | 3 | 4 | 5 |
| 11. I would be able to use the contents in my work | 1 | 2 | 3 | 4 | 5 |

Organization

- | | | | | | |
|--|---|---|---|---|---|
| 12. The workshop was announced well in advance | 1 | 2 | 3 | 4 | 5 |
| 13. The objectives of the workshop were explained in advance | 1 | 2 | 3 | 4 | 5 |
| 14. The venue of the workshop was easily accessible | 1 | 2 | 3 | 4 | 5 |
| 15. The environment for the workshop was ideal for learning | 1 | 2 | 3 | 4 | 5 |
| 16. The audio-visual equipments were used properly and appropriately | 1 | 2 | 3 | 4 | 5 |
| 17. Adequate reading and teaching materials were used | 1 | 2 | 3 | 4 | 5 |
| 18. The materials shared with the participants will have practical use | 1 | 2 | 3 | 4 | 5 |

Outcomes

- | | | | | | |
|--|---|---|---|---|---|
| 19. The workshop introduced new skills | 1 | 2 | 3 | 4 | 5 |
| 20. Adequate time was spent on important skills | 1 | 2 | 3 | 4 | 5 |
| 21. The workshop generated new thinking on
Poverty and Nutrition Policy Analysis | 1 | 2 | 3 | 4 | 5 |
| 22. I will apply the skills learned in this workshop in my own work | 1 | 2 | 3 | 4 | 5 |
| 23. The workshop should be repeated by expanding specific topics
Give specific examples | | | | | |
| 24. My overall assessment of the workshop is (1=lowest, 5 = highest) | 1 | 2 | 3 | 4 | 5 |