

PN-AAQ-964
 15N-26440

50272-101

REPORT DOCUMENTATION PAGE		1. REPORT NO. JDMCG/TR-84/6	2.	3. Recipient's Accession No.
4. Title and Subtitle Private Sector Research Retrieval and Analysis Project: Sierra Leone			5. Report Date June 2, 1984	
7. Author(s) Jonathan D. Meyer			6.	
9. Performing Organization Name and Address JDM Consulting Group 12002 Greenleaf Avenue Potomac, MD 20854 (301) 340-7123			10. Project/Task/Work Unit No. 698-0135-3-6134605	
12. Sponsoring Organization Name and Address Office of Health & Nutrition, Bureau For Africa U.S. Agency For International Development Room 2492, New State, Washington, DC 20523 (202) 632-8174			11. Contract(C) or Grant(G) No. (C) AFR-0135-0-00-3061-01 (G)	
13. Type of Report & Period Covered Final, 1978 to 1983			14.	
15. Supplementary Notes This paper is one of a series by the author on the topic of private sector financing of primary health services in Africa. The series includes Rwanda, Somalia, Upper Volta, Niger, Senegal, Liberia, Sierra Leone, Swaziland, and an Overview & Recommendations chapter.				
16. Abstract (Limit: 200 words) The purpose of this paper is to investigate issues pertaining to private financing of health services in Sierra Leone. While it is recognized that Sierra Leone is a very poor country whose citizens suffer among the worst health conditions in the world, it is also recognized that: a) external assistance for recurrent costs is growing less acceptable over time, and b) the vast majorities of poor populations in Africa (and, presumably, in Sierra Leone) do not rely on their national governments to provide services; they self-treat and rely on the services of traditional and self-styled practitioners. Part b) can be tested empirically for the case of Sierra Leone. There exists an expenditure survey, conducted in 1975, to investigate consumer behavior with respect to food items, but data were collected for other expenditure categories, as well. Included among them is health. So far, no analysis was conducted on health expenditures. The data set is composed of four file; each containing about 140 households. The files are written onto a 5 1/4 inch minifloppy disk in CP/M (for a Kaypro computer) and have been edited and are ready for analysis. Summary statistics are presented for 35 variables. 9 item bibliography.				
17. Document Analysis a. Descriptors 1) Sierra Leone 2) Health 3) Health Costs 4) Private Sector 5) Primary Health Care 6) Health Services 7) Africa 8) Rural Health 9) Finance 10) Household Expenditure Survey 11) Demand				
b. Identifiers/Open-Ended Terms				
c. COSATI Field/Group				
18. Availability Statement: Release Unlimited		19. Security Class (This Report) UNCLASSIFIED		21. No. of Pages 15
		20. Security Class (This Page) UNCLASSIFIED		22. Price

PRIVATE SECTOR RESEARCH RETRIEVAL AND ANALYSIS PROJECT
Project No. 698-0135-3-6134605

SIERRA LEONE

Support for this project was provided by the
United States Agency for International Development
Contract No. AFR-0135-0-00-3061-01

NTIS Accession Number JDMCG/TR-84/6

Jonathan D. Meyer
JDM Consulting Group
12002 Greenleaf Avenue
Potomac, MD 20854

June 2, 1984

PLEASE NOTE

This paper is one of a series by the author on the topic of **private sector financing of primary health services in Africa.**

The titles in the series are the following:

"Private Sector Research Retrieval and Analysis Project: Somalia," October 18, 1983, NTIS Accession Number JDMCG/TR-83/1

"Private Sector Research Retrieval and Analysis Project: Liberia," November 29, 1983, NTIS Accession Number JDMCG/TR-83/2

"Private Sector Research Retrieval and Analysis Project: Upper Volta," December 20, 1983, NTIS Accession Number JDMCG/TR-83/3

"Private Sector Research Retrieval and Analysis Project: Niger," January 22, 1984, NTIS Accession Number JDMCG/TR-84/1

"Private Sector Research Retrieval and Analysis Project: Zimbabwe and Lesotho: Bibliographies," February 16, 1984, NTIS Accession Number JDMCG/TR-84/2

"Private Sector Research Retrieval and Analysis Project: Rwanda," February 22, 1984, NTIS Accession Number JDMCG/TR-84/3

"Private Sector Research Retrieval and Analysis Project: Swaziland," March 8, 1984, NTIS Accession Number JDMCG/TR-84/4

"Private Sector Research Retrieval and Analysis Project: Senegal," June 1, 1984, NTIS Accession Number JDMCG/TR-84/5

"Private Sector Research Retrieval and Analysis Project: Sierra Leone," June 2, 1984, NTIS Accession Number JDMCG/TR-84/6

"Private Sector Research Retrieval and Analysis Project: Overview and Recommendation - Household Expenditure Survey," June 2, 1984, NTIS Accession Number JDMCG/TR-84/7

Acknowledgements

This paper was prepared as part of the Private Sector Research Retrieval And Analysis Project for the Office of Health and Nutrition, Technical Resources, Bureau for Africa, U.S. Agency For International Development, Contract No. AFR-0135-0-00-3061-01. The author would like to thank Professors Larry Connor and Victor Smith and Mr. Chris Wolf, all of Michigan State University, for their generous assistance in preparing the Sierra Leone Expenditure Survey data files.

Any and all errors are the sole responsibility of the author.

TABLE OF CONTENTS

I. Introduction	1
II. Policy Analytic Uses of the Expenditure Survey	2
III. Description of the 1975 Sierra Leone Expenditure Survey	7
IV. Conclusions and Recommendations	9
V. Footnotes	10
VI. Bibliography	11
Figure 1 Recurrent Health Expenditures 1976 - 1982: Sierra Leone (000's Leones)	3
Table 1 Mean Expenditures for Health: Medicines and Professional Fees, Sierra Leone, 1975	5
Table 2 Respondent Characteristics, Expenditure Survey, Sierra Leone, 1975	8

I. Introduction

The purpose of this paper is to investigate issues pertaining to private financing of health services in Sierra Leone. This paper is one of nine related to private financing of health services in eight African countries; the ninth paper contains an overview and recommendations.(1) Recent changes in policy and economic environments have increased the prominence of the issues of local financing and non-governmental support of the health system. The worldwide recession has severely affected the ability of poor countries to provide public benefits. Furthermore, a political philosophy eschewing the public sector's role in remedying social problems has caused donor countries to reevaluate their roles in foreign assistance programs. The resulting attention to developing countries' private sectors has demonstrated that they account for a substantial portion of all health sector expenditures.(2) Policies are being developed and pursued which exploit local, possibly more stable, financing sources. This introductory paper is offered in anticipation of a need for guidance to missions in private sector health policy.

While it is recognized that Sierra Leone is a very poor country whose citizens suffer among the worst health conditions in the world, it is also recognized that

a) external assistance for recurrent costs is growing less acceptable over time, and

b) the vast majorities of poor populations in Africa (and, presumably, in Sierra Leone) do not rely on their national

governments to provide services; they self-treat and rely on the services of traditional and self-styled practitioners.

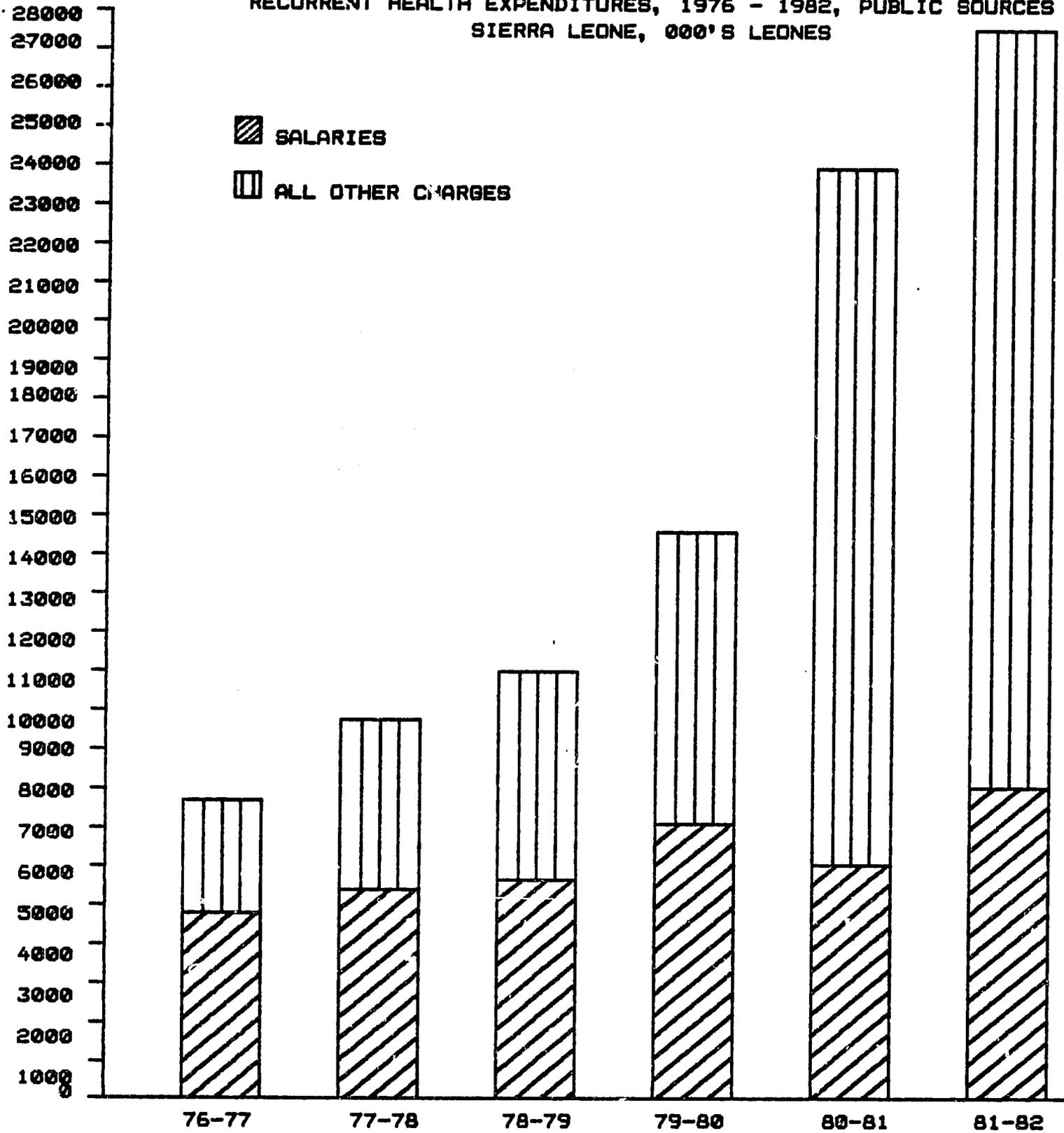
The principal motivation for this study is the policy decision, U.S. Government-wide, that government is to be the provider of services of last resort. That is, alternatives to publicly financed services must be sought and exploited to a greater degree than they have in the past. Note the continued rise in public expenditures for health in Sierra Leone, as shown in Figure 1.

An emphasis in meeting the increasing demands for public expenditures has evolved to one of looking to the private sector to finance services. An assumption inherent in this policy which needs testing in each specific case is that private individuals and groups are currently financing much of their own care. That assumption can be tested in Sierra Leone. Unlike any other country in the scope of work for this project, there exists for Sierra Leone an expenditure survey, conducted in 1975. That survey was conducted to investigate consumer behavior with respect to food items, but data were collected for other expenditure categories as well. Included among the other expenditure categories is health. So far, no analysis was conducted on health expenditures. This author proposes such a study for implementation.(3)

II. Policy Analytic Uses of the Expenditure Survey

If governments (U.S. and GOSL) are to reduce the amount of recurrent costs they will pay, it follows that the costs must be

RECURRENT HEALTH EXPENDITURES, 1976 - 1982, PUBLIC SOURCES
SIERRA LEONE, 000'S LEONES



Source: Sierra Leone Ministry of Health, 1983.

paid in part or in total by another source, and the public costs must be reduced in providing the services, or the services will be reduced. Though it may be most preferable to seek ways to produce services more efficiently (less costly), that is not the focus of this paper. The focus of this paper is the shifting of the cost burden from public sources of revenue to private sources. The consumer is an important and long unrecognized source for financing health services. However, if consumers pays a greater share than in the past, this implies a price increase to them, and, the predicted response to a price rise is a reduction in the amount of the good or service purchased. Alternatively, other sectoral policies (notably agriculture) increase rural consumers' incomes. The predicted consumer response to an income increase is to increase expenditures on "normal" goods and services. Modern health services may be among them; expenditures on traditional health services may well be decreased with increased income. It is important to AID analysts to investigate the effects on utilization of policies which increase prices and incomes. The paucity of reliable information on rural consumer behavior represents a serious constraint on development planning. (4) In Sierra Leone, however, there is a rare opportunity to make use of an extant household expenditure survey. Such information is essential in anticipating consumer response to government efforts to capture increasing shares of recurrent costs for health services from consumers. For example, if consumers reduce their utilization in response to increases in the price of care, such reduction can cause severe health problems among those who cut back use because the price made it

TABLE 1

MEAN EXPENDITURES FOR HEALTH: MEDICINES AND PROFESSIONAL FEES

Sierra Leone, 1975

	Mean (Leones)	Sample size
Medicines, Undifferentiated	150.13	8
Medicines, Modern Domestic	42.61	77(*)
Medicines, Modern Imported	23.76	112(*)
Medicines, Traditional	152.73	11
Professional Fees, Unspecified	535.79	108(*)
Professional Fees, Dispenser	430.00	3
Professional Fees, Hospital	762.06	17
Professional Fees, Traditional Practitioner	530.14	7

(*) The samples for which the sample size is sufficiently large to statistically compare means. For the other mean expenditures, those with small sample sizes, the estimates are both consistent and unbiased, though their standard errors are comparatively large.

it unaffordable. Alternatively, agricultural policies may increase incomes, thus improving the consumers' ability to pay for health care. To avoid creating worse problems than the policy was meant to solve, two policy actions may be taken. 1) Subsidies may be paid to those consumers who would reduce their utilization and thereby suffer worse health problems. 2) Price rises may be directed to those who, by virtue of higher incomes, may be able to pay a higher proportion of the true cost of the care.

It is important to policy makers in developing such policies to rely on information on how much is spent for fees, medicines, hospital care, other types of care (including traditional care). Expenditure information for traditional care is very rare. Reviews of the literature for Africa showed no published accounts.(5) In fact, the only household level expenditure information for traditional care was found in the Sierra Leone Expenditure Survey. The material presented in Table 1, though very rare, was taken from the data set derived from the Sierra Leone Expenditure Survey. No analysis was conducted on the data. Only the unconditional means of the expenditure data are presented in Table 1. For some variables the sample size is too small to specify further (e.g., to divide the sample by income group), but for at least two expenditures, imported medicines and professional fees (unspecified) the samples are sufficiently large.

Note, in Table 1, that for both medicines and professional fees, the levels of expenditure on traditional care are as high, and sometimes nominally higher, than those of modern care, for all categories except hospital care. This information is likely to result in an increase in the estimated amounts of private expenditures for care, since it was heretofore believed that expenditures on traditional care were lower than for modern care and virtually all traditional care is paid for privately.

The material in Table 2 is a description of the variables from the larger expenditure survey which were selected by the author to comprise the Sierra Leone Health Expenditure Data Set, a subset of the Michigan State Sierra Leone Expenditure Survey.

III. Description of the 1975 Sierra Leone Expenditure Survey

A two year study of income distribution among rural households in Africa was financed under a United States Agency for International Development Contract (AID/ta-C-1328) with Michigan State University. The data collection in Sierra Leone was carried out as part of the Rural Employment Research Project at Njala University College, Sierra Leone, financed by a United States Agency for International Development Contract from Michigan State University (AID/csd 3625) and by the Rockefeller Foundation. (6)

The data set is composed of four files; each containing approximately 140 households. The files are written onto 5 1/4 inch minifloppy discs and have been edited and are ready for analysis.

TABLE 2

DESCRIPTION OF THE MICHIGAN STATE SIERRA LEONE DATA SET

1. The unit of observation is the family.
2. The event of interest is an expenditure (in Leones) made for professional health services or medicines.
3. The types of professional services include payments made to:
 - a. Hospitals
 - b. Dispensers
 - c. Other modern medical providers
 - d. Traditional providers
4. The types of expenditures for medicines include:
 - a. Domestic modern medicines
 - b. Imported modern medicines
 - c. Traditional medicines
 - d. Undifferentiated medicine expenditures
(presumably modern medicines whose origins are unknown)
5. The data set contains 174 families and 409 expenditure events, 343 of which include information on the amount spent (the remaining 66 indicate only the type of expenditure).
6. As described in the table on the following pages, the data set includes prices, income, and proxies for taste (education, family size, etc.)

VARIABLE	N	MEAN
1. Expenditures for hospital care	17	762.06
2. Expenditures for dispensers	3	430.00
3. Expenditures for other medical providers	108	535.79
4. Expenditures for traditional practitioners	7	530.14
5. Expenditures for domestic modern medicines	77	42.61
6. Expenditures for imported medicines	112	23.76
7. Expenditures for traditional medicines	11	152.73
8. Expenditures for medicines, undifferentiated	8	150.13
9. Visit price for hospital care	17	762.06

VARIABLE	N	MEAN
10. Visit price for dispensers	3	430.00
11. Visit price for other medical providers	108	524.37
12. Visit price for traditional practitioners	7	530.14
13. Unit price for domestic modern medicines	77	37.93
14. Unit price for imported medicines	112	14.56
15. Unit price for traditional medicines	11	26.00
16. Unit price for medicines, undifferentiated	8	150.13
17. Total annual family expenditures	309	713.07
18. Net family income	313	584.57
19. Family income rank, deciles (nat'l. sample)	313	6.06
20. Family size	309	6.40
21. Consumer equivalents	313	4.86
22. Number of infants & toddlers (0 - 5 yr)	309	0.835
23. Number of children, 5 - 10 years	309	0.974
24. Number of children 11 - 15 years	309	0.751
25. Number of males, 16 - 65 years	309	1.55
26. Number of females, 16 - 65 years	309	1.94
27. Number of family members over 65 years	309	0.340
28. Dependency ratio	309	0.872
29. Age of head of household	309	50.46
30. Number of wives of head of household	309	1.57
31. Years of English educ., head of household	310	0.313
32. Years of Arabic educ., head of household	310	2.14
33. Share of family total labor sold	309	0.055
34. Fraction of total output sold (excl. labor)	309	0.156
35. Price of clean rice (Leones per kg)	309	0.260

IV. Conclusions and Recommendations

An opportunity exists to produce policy relevant information regarding private household expenditures for health in Sierra Leone. This information is important to those designing policies which expand coverage while using existing private sector resources. The analysis and documentation are estimated to require approximately twenty days of work at an approximate cost of \$4,000. The data set and all analytic tools (programs and hardware) are owned by the author.

In light of 1) the availability of this unusual data set, 2) the fact that the data have already been collected, have never been analyzed, and are in "analysis ready" condition, and, most importantly, 3) that the analysis can produce private sector policy information unique among the eight countries studied in this project(*), it is recommended that the Sierra Leone Health Expenditure Survey Data Set be used to study consumer expenditures for health in Sierra Leone.

(*) Somalia, Rwanda, Niger, Upper Volta, Liberia, Senegal, Sierra Leone, and Swaziland.

V. Footnotes

1. The countries discussed in the eight papers include Somalia, Rwanda, Niger, Upper Volta, Senegal, Liberia, Sierra Leone, and Swaziland.
2. See Zschock, Golladay, WHO, and Stinson.
3. A subset of the larger Michigan State data set has been prepared and written onto 5 1/4 inch disks for use with microcomputers. The author has a copy of the files and has used them to prepare the information in Tables 1 and 2; the means, standard deviations, and number of observations of many of the variables.
4. Lynch, p. 1.
5. See a companion piece by Meyer, "Private Sector Research Retrieval and Analysis Project: Overview and Recommendation - Household Expenditure Survey," June 1, 1984. In it is reported a survey of traditional practitioners which was conducted in Botswana in 1976. It estimated individual expenditures on traditional care by collecting information on the practitioners' income and dividing the number of consumers served into it. The Sierra Leone Expenditure Survey was the only one found which was derived from household level interviews and contained household level income and price information.
6. King and Byerlee, p. xi.

VI. Bibliography

- Golladay, Frederick, and Liese, Bernhard; "Health Problem and Policies in the Developing Countries," World Bank Staff Working Paper No. 412, World Bank, Washington, DC, August, 1980.
- King, Robert P., and Byerlee, Derek; "Income Distribution, Consumption Patterns, and Consumption Linkages in Rural Sierra Leone," African Rural Economy Paper No. 16, Department of Agricultural Economics, Michigan State University, East Lansing, Michigan, 1977.
- Lynch, Sarah Gibbons; "An Analysis of Interview Frequency and Reference Period in Rural Consumption Expenditure Surveys: A Case Study from Rural Sierra Leone," Masters Degree Thesis, Department of Agricultural Economics, Michigan State University, East Lansing, Michigan, 1979.
- Meyer, Jonathan D., "Private Sector Research Retrieval and Analysis Project (PSRRAP): Overview and Recommendation - Household Expenditure Survey," A report prepared for USAID, Washington, DC, June 1, 1984.
- Smith, Victor E., Lynch, Sarah, Whelan, William, Strauss, John, and Baker, Doyle; "Household Food Consumption in Rural Sierra Leone," Working Paper No. 7, Department of Agricultural Economics, Michigan State University, E. Lansing, Michigan, 1979.
- _____, Strauss, John, Schmidt, Peter, and Whelan, William; "Non-Price Factors Affecting Household Food Consumption in Sierra Leone," Working Paper No. 12, Department of Agricultural Economics, Michigan State University, E. Lansing, Michigan, 1979.
- Stinson, Wayne; Community Financing of Primary Health Care, American Public Health Association, Washington, DC, 1982.
- WHO, Financing of Health Services, Report of a WHO Study Group, Technical Report No. 625, World Health Organization, Geneva, 1978.
- Zschock, Dieter K.; Health Care Financing in Developing Countries, International Health Programs Monograph Series, No. 1, American Public Health Association, 1982.