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Field Methods for Exploring the Role of Indigenous Rural Periodic Markets in Developing Countries

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Abstract

In developing countries, rural periodic markets frequently represent the first point of sale of agricultural products, particularly for small-scale farmers. This chapter briefly reviews the approaches which have been utilized by geographers and other social scientists in exploring the workings of such markets and the activities of traders operating within them. It then discusses in some detail the approach adopted by the author, a geographer, in two field studies of rural periodic market trade undertaken over varying time scales in different regions of northern Nigeria.

Key words: Geography, survey design, interview procedures, data recording.

Periodic Markets and Research Methods in the Social Sciences: Spatial Perspectives

Periodic markets are public gatherings at an appointed or customary location where people converge to buy, to sell, and to interact socially, at regular intervals less frequently than daily (Bromley 1980). They have a particular fascination for geographers and economic anthropologists, whose differing approaches to the study of rural periodic market trade have been shaped by broad disciplinary perspectives and training. In both cases the focus has usually been on marketplaces and marketplace trade, rather than on marketing of agricultural produce *per se*.² Nonetheless, rural periodic markets play an important role in the agricultural economies of many developing countries.

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² See Hollier (1986) for a rare geographical analysis of foodstuffs marketing from a commodity perspective.

They are frequently the first point of sale of agricultural products—particularly from small-scale farmers—and often also the point of sale of manufactured durable goods to farmers.

Geographical research on rural periodic markets expanded enormously in the 1960s and 1970s. It tended to reflect the geographer's concern with spatial patterns by focusing on the analysis of spatial structures of marketplace systems on a sub-regional or regional scale. Up to the late 1960s much of this work was descriptive, but throughout the 1970s there was increasing emphasis on analytical approaches, with particular interest in exploring the structure and function of the spatio-temporal integration of market systems (reflecting a long-standing fascination with space/time interrelationships).

Applications of central place theory and other spatial models from the location theory tradition were common at this time, encouraged by the prevailing emphasis on quantitative techniques in social science. Thus the emphasis tended towards measurements of distance between markets and aggregate counts of market traders attending markets across a whole region or country (for example, Thorpe 1978 for Iran), later sometimes coupled with large-scale questionnaire sample surveys of traders. Bromley's study of Ecuador comprised trader counts followed by 1,109 interviews with market traders in 13 large- to medium-sized centers, with subsequent statistical analysis (Bromley 1980). The move to interviewing traders reflected growing awareness of the "deficiency of a substantial amount of recent geographical research on systems of periodic and daily markets. . . (which) stem largely from an excessive preoccupation with the geometry of spatio-temporal phenomena, from the application of some rather questionable techniques of spatial analysis (such as nearest neighbor analysis), and from a tendency to infer process from patterns rather than to study processes in their own right" (Bromley 1980). In an important review paper, R. H. T. Smith (1980) similarly called for a shift towards investigation of processes which would require, "a more detailed knowledge of the characteristics, values, and spatial behavior of the participants in periodic marketing and periodic marketplaces." There was growing recognition that marketplace networks can only be understood in the context of the social structure of marketplace participants (Trager and Smith 1981); the economic and social elements of the market system are often inextricably intertwined. Unfortunately, this shift in perspective which reflected the growing interest in humanistic and behavioral approaches in geography, was to have only limited impact in the field of rural periodic market study in the 1980s, as geographers became increasingly preoccupied with production and less concerned with marketing and distribution.

In economic anthropology much work has focused (through participant observation techniques) on detailed economic behavior in markets,

with analyses of individual economic relationships and the nature of transactions (see Plattner 1989: 209-221), though some anthropologists have found larger surveys a useful preliminary or complement to detailed ethnographic research in considering rural economies, as a way of avoiding the danger of generalization from small samples. For example, Handwerker (1979) included interviews with 980 shoppers, in addition to more intensive techniques, in his study of Liberian markets.

Cross disciplinary approaches in periodic market studies are hardly surprising, given the complex interdependence of components in exchange systems. Individual researchers have frequently adopted a mix of techniques and perspectives emanating from their own and neighboring disciplines. In anthropology the work of Carol Smith is particularly notable for its adoption of a mix of geographical and anthropological perspectives in research on periodic market systems (Smith 1975, 1976, 1985). Graham Hollier (1986), a geographer researching spatial patterns in foodstuffs prices in Cameroon, adopted a method from Strickland and Schlesinger (1969) termed "lurking," ("patient unobtrusive observation of market transactions, recording the prices actually agreed by buyers and sellers") which he supplemented with data from key informants and direct questioning to generate apparently accurate price information. Much of his work involved participant observation in a style more commonly associated with ethnography.³ Occasionally geographers and anthropologists have combined forces to produce useful collaborative research (e.g., Polly Hill and R.H.T. Smith 1972). Recently, there has been renewed appreciation among geographers of the importance of cultural traditions and growing interest in the application of qualitative ethnographic techniques (Eyles and Smith 1988). There seems to be considerable potential for the further combination of geographical and anthropological approaches in field studies of rural periodic markets.

My own work on rural periodic markets, discussed below, though based in geography, and thus essentially spatial in perspective, takes an integrative approach. It combines "in breadth" large-scale survey research with work of a more micro-scale "in depth" nature, attempting to probe linkages between spatial, socio-cultural, economic, and political dimensions of the exchange process at work in marketplaces in order to gain a fuller appreciation of what Siddle and Swindell (1990: 89) so aptly refer to as the "texture" of this "essentially holistic activity". Much of my work in rural markets has centered round three interlinked foci of investigation:

³ Lurking is reviewed (unenthusiastically) by Werner and Schoepfle (1987: 80-81). For an introduction to participant observation techniques, see Burgess (1982: 45-72); Werner and Schoepfle (1987); and Evans in Eyles and Smith (1988: 107-210).

- The dynamics of rural periodic market systems and the specific influence of changing accessibility.
- Gender differences in market trade with particular reference to mobility of participants.
- The impact of change in marketplace systems on gender patterns of trade in specific cultural contexts.

All have implications for the marketing of agricultural produce and its evacuation from rural areas. The development of a field research program which addresses these questions is discussed below, following a brief outline of the two field studies in which the procedure was established.

Markets in Borno and the Jos Plateau: Outline of Two Field Research Programs

My first major field study of rural periodic markets was carried out in Borno, in the remote sudan savanna region of northeast Nigeria in 1977 and 1978, and funded by the University of Maiduguri. I had been resident in the region since 1975. The project consisted of wet and dry season studies of the 35 rural markets of four districts surrounding the state capital, Maiduguri (see Figure 1), and aimed to explore the dynamic nature of the market system and its significance both for market participants and, more widely for the ongoing process of rural development. The fieldwork took place at a time when road construction (funded by Nigeria's oil boom) was proceeding rapidly in the region and the market system was clearly in a state of flux.

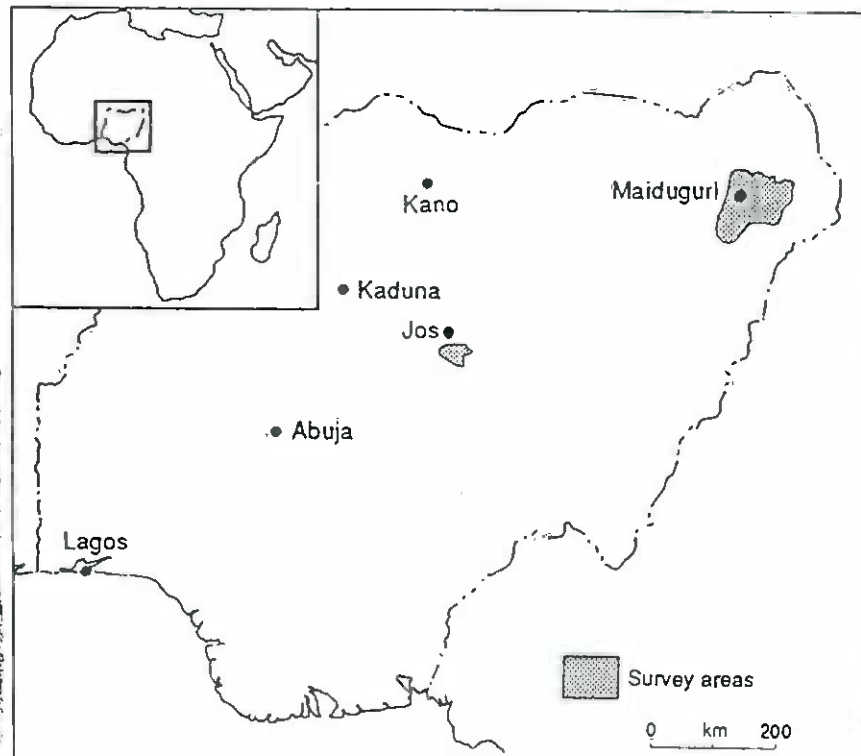
In this region the periodic markets have a weekly cycle, meeting once every seven days. The markets possess limited infrastructure; sometimes a few block stalls and a slaughter block, possibly a well. Often the majority of traders, especially women, simply display their wares on a cloth on the ground, or perambulate around the marketplace with their goods on a head tray. In all the rural markets, foodstuffs occupied the greatest area and generally the greater proportion of traders sold agricultural produce. The majority of traders were also farmers and sold agricultural produce and other goods on a very small scale both retail direct to consumers, and in some cases also to wholesale dealers.

The central element of the survey consisted of semi-structured questionnaires to (2,000) male and (700) female traders in the marketplace on market day. These interviews focused on the movement of trade goods and mobility of traders. The trader survey was preceded by semi-structured and group interviews with local government officials, district and village heads and elders, and market officials. It was coupled with interviews with consumers

other market visitors and villagers; informal discussion with some of the major traders (usually male) and some women traders; observation of site access and drainage conditions; and construction of site plans indicating location of stalls and stall types (and appending further notes regarding sex of stall holder, any segregation by ethnic group, etc.). Details of the full schedule of work, refined during the Plateau study, are provided in the following section which highlights some of the specific issues which were addressed in the studies. The data were subsequently analysed using an SPSS cross-tabulation program. Further field visits were made to the Borno survey area between 1978 and July 1984, when another, smaller market study was undertaken to assess the changes in the system over the intervening period.

In January 1991, I undertook a dry season study of rural periodic markets on the Jos Plateau in the Middle Belt of Nigeria, as part of the Jos Plateau Environmental Development Program (a joint project of the universities of Durham and Jos, financed by the European Development Fund) (see Figure 1). This study aimed to provide a broad picture of the condition of rural markets and produce evacuation in the former mining areas of the Plateau.

Figure 1. Nigeria, showing the two survey areas.



where dry season farming has recently expanded substantially, and to identify issues for further detailed research. It was accompanied by studies of produce evacuation from a sample of small, medium, and large farms (Porter 1992). The approach adopted was based on my earlier Borno experience, but in this case consisted of a study of 23 markets, principally in three contiguous districts. As in Borno, rural periodic markets meet every seven days and most markets have limited infrastructure. Most of the 459 female and 345 male traders interviewed were involved in farming to some degree. Fieldwork included semi-structured individual and group interviews, "guided" interviews, informal free discussion in the markets, and observation; and was followed by cartographic analysis and an SPSS cross-tabulation of trader interviews. A consumer survey was omitted from this study because of time constraints, though traders (who often purchase goods during their market visit) were questioned about purchases.

The Field Program

In the field program outlined below the method adopted is a composite one, utilizing a range of approaches. There is a substantial literature supporting the use of multiple strategies in fieldwork (Burgess 1982: 163-188; Werner and Schoepfle 1987: 68). Much of the procedure discussed is essentially common sense, but may provide a checklist for anyone contemplating field survey work in markets.

Preparative work

Outside the field study region

Library research. Once the selection of the broad regional context for research has been made, much useful background material on rural markets and trade (and associated information concerning production and consumption) in a particular geographic area can be obtained through consultation of relevant published sources: historical background from contemporary travelers' accounts, ethnographic surveys, gazetteers, government reports, etc. In Borno, a great deal of background information on Kanuri culture was gleaned from the writings of the anthropologist Ronald Cohen, who conducted field research in the region in the 1950s and 60s. Unpublished material, including graduate theses and undergraduate dissertations, may also prove illuminating, though in areas like Borno, where universities and research institutions have only been established in recent years, such material is often limited. Obviously, there are dangers of bias in using secondary information which must be borne in mind.

Archives. Consultation of archival material is also often relevant and has been used by some geographers to provide valuable background to studies of

contemporary rural market systems (e.g., Gana 1973; Barrett 1988). In Nigeria the national archives offices hold a wealth of material pertaining to colonial markets and trade in agricultural products (district notebooks, assessment and reassessment reports, special district reports, annual, half-yearly and quarterly provincial reports, provincial administrative correspondence, etc.).⁴ In the Borno study archival material (together with historical accounts of European travellers to the region and oral testimony) was used to construct a picture of the long-term evolution of rural markets.

Maps. Acquisition of maps at a variety of scales, including ones at as detailed a scale as possible, is vital for any marketing study with a spatial component. A careful examination of maps regarding accessibility, administrative boundaries, and the like should also assist in preliminary decisions concerning the selection of the field survey area. The maps available may well be inaccurate, but it is usually a much simpler task to amend and add to existing maps than to start mapping from scratch. Often maps are only available at national survey offices (Kaduna and Lagos in Nigeria) and, even so, series may well be incomplete. In Nigeria, maps at a scale of 1:50,000 provided detailed (but outdated and possibly inaccurate) coverage. They appear to be unavailable for some areas of the country. In the field, 1:500,000 sheets, showing roads and major settlements, and old provincial maps (at 1:1,000,000) indicating district boundaries, were found to be particularly useful for plotting market locations. In the Borno survey area the propensity of markets and, indeed, whole villages, to move site made mapping extremely difficult. Air photographs may, where available, assist in the location of sites. A useful introduction to the use of maps and air photographs in African fieldwork is provided by Mitchell (in Peil et al. 1982: 61-96).

Research permission. Other preliminaries include obtaining official permission for fieldwork. A range of viewpoints on this sometimes morally difficult matter was expressed by geographers in a series of papers and comments in the journal *Area* in 1987 and 1988. In Nigeria, research permission is generally obtained through association with a local university. Advice concerning restrictions should, if possible, be obtained from researchers in the field. It is usually important to obtain the necessary links before approaching local officials (see below).

In the field study region

Additional pre-survey preparation will be required once the researcher has moved into the fieldwork area.

⁴ Much material relating to agricultural marketing and markets in British ex-colonies is held at the Public Record Office, Kew, at Rhodes House, Oxford, and (for West Africa) in the Picton Archives, Liverpool, UK.

Local permission. In Nigeria it is important to contact local government officials concerning the project before undertaking any fieldwork. A letter requesting support from the local university registrar's office—assuming affiliation has been negotiated—is generally sufficient to obtain immediate Local Government approval. The secretary to the Local Government Council (LGC) will then prepare letters informing district and village heads in the proposed fieldwork area about the project, and also a letter of permission which the researcher should carry on all field visits. Researchers in rural markets are highly visible and may rapidly become embroiled in confrontational situations if they have not worked through the appropriate channels to inform the relevant authorities. On one occasion the local university insisted on the author obtaining permission from the Nigerian Security Organization before commencing fieldwork in a sensitive border area. Permission was granted by the local branch following an intensive hour-long interview only on the grounds that the researcher was known in the survey area, having carried out previous work there. Conditions change and local markets can be volatile; it is always wise to check on the situation immediately prior to commencing fieldwork, however well the area is known.

Locating markets. For geographers concerned with spatial distributions of rural periodic markets, the location of markets of all kinds is particularly crucial. Discovering the existence and location of rural periodic markets can be a major detection exercise and in Nigeria usually involves some element of trial and error which extends through the survey program. Useful preliminary (inaccurate) lists of markets and market days were obtained in the Borno and Jos surveys from LGC headquarters. In the Borno survey area only 18 of the 48 markets in operation in 1977 were listed in the LGC's printed schedule of markets obtained that year prior to fieldwork, and only 13 of their associated villages were shown by name on published maps of the region. On the Plateau the list of gazetted and non-gazetted markets provided by the LGC Tax Superintendent proved to be similarly incomplete. However, Hill and Smith (1972) mainly used local government records as the basis for their analysis of the spatial and temporal integration of periodic markets in four northern Nigerian emirates; presumably these were more reliable than the Borno and Plateau records. Fuller listings of markets and preliminary information about them were gathered from district heads, but even so, new markets were discovered as the surveys proceeded (generally through interviews with village area heads and traders), and other markets thought still to be in existence were found to be defunct.

On the Jos Plateau the situation was complicated by the existence of *kunnu* markets, where the principal business is the sale of beer and cooked food for immediate consumption, in addition to rural periodic markets of a more conventional type in which mixed retail and wholesale business takes place.

heads made a clear distinction between the two types, but LGC officials and district heads in some cases were wrong regarding the current status of markets, for sometimes general markets have declined into *kunnu* markets, and sometimes *kunnu* markets have grown into full-scale periodic markets. The existence of neighboring markets with identical names further complicated matters in both the Plateau and Borno, and in Borno the not infrequent migration of villages and markets made published maps particularly inadequate; within living memory a change of site (in one case of 16 km) had been recorded for 16 of the 35 markets surveyed and one bush market had moved site at least four times.

Interview schedules. There is much useful published material concerning the construction of questionnaires/interview schedules (Peil et al. 1982; de Vaus 1990, etc.), but some comments can be made regarding their preparation for use in rural periodic markets.

Given time constraints in fieldwork, it is often necessary, but certainly undesirable (see Chambers 1983: 51), to construct questionnaire and interview schedules prior to entering the fieldwork area. If at all feasible, preliminary visits to local markets should be made first. In the Borno study, familiarity with local markets meant that relatively few amendments were required following the pilot survey.

In the field survey procedure (outlined below under The Survey), it is assumed that assistance with interviewing will be obtained. Interviewers obviously must have fluency in local languages used by traders, but a preliminary decision needs to be taken whether to print interview schedules in the country's official national language (English in Nigeria) or/and in a local language. In Borno, where the ethnic majority are Kanuri, the trader interview schedule was printed in both English and Kanuri. On the Plateau, though the indigenous ethnic group in the survey area are principally Birom, the trader questionnaire was printed only in English because the rural population is very mixed as a result of in-migration during the tin-mining era. Field assistants (carefully briefed in advance about the questions) translated into the relevant local language or the trading *lingua franca*, Hausa; this seems to have resulted in few errors of interpretation, perhaps because some effort was taken to clarify indigenous terminology for types of trade, etc., at the outset. Nonetheless, where only one language will be commonly encountered in the survey area it is advisable to prepare questions in that language, for standardization and to avoid reinterpretation by individual interviewers. The hazards of translation are well described by Briggs (1986) and Werner and Schoepfle (1987: 354-379). For government officials and the like, schedules prepared in the national language will usually be sufficient.

Whatever language is selected, prepared questions should be reviewed

conduct the interviews. Unseen back translations are a useful cross check to avoid error and ambiguity. Another review of the principal interview schedule(s) following the pilot study is essential, since misinterpretations other than those generated by mistranslation may emerge. In my initial Borno interview schedule, there was an inbuilt assumption—acquired from the periodic markets literature—that many long-distance traders would be encountered in markets, and a series of questions had been designed to establish their movements. The pilot survey suggested that, in fact, most traders returned home every night, and some schedule questions were redesigned to elucidate greater information on local travel to markets. The precise content of the interview schedules will depend on the aims of the survey, but a few general points may be suggested. So far as length is concerned, a trader survey cannot be too long if the interview is to be conducted in the marketplace. In the Borno survey a total of 33 short questions were put to traders; this appeared to present no problem regarding length and these were extended to 47 questions in the Plateau survey. Again, few incomplete questionnaires were returned, though this must be approaching the limit; traders were extremely patient despite the interruption to their normal business. Werner and Schoepfle (1987: 344) suggest a maximum of 50 questions.

All discussion concerning financial matters was reserved to the end of the interview schedule; this appears to be the most effective way to deal with such a tricky question. Nonetheless, trader response rates to a question about estimated gross market takings for the day of interview was much lower than for all other questions. In the Plateau survey 21% of men and 19% of women refused to attempt any estimate; "it depends on God" was a common reply. Direct questions to traders to elicit information about profits are unlikely to be satisfactory (see Crow 1988-89 regarding Islam et al.'s Bangladesh survey), hence Hollier's use of more informal methods—participant observation and "lurking"—and Crow's discussions with informants contacted through friends and relations and observation of participants in foodgrain markets (Hollier 1986; Crow 1988-89).

One final practical point. It is advisable to print the interview questions on one side of paper only; even experienced interviewers occasionally miss the back of the sheet, especially when working in the crowded conditions of a busy market.

Recruitment of field assistants. This is probably the most critical element in the pre-survey program. Fieldwork in hot, dusty rural markets is demanding and exhausting. Assistants must be fluent in local languages encountered in the markets and able to communicate proficiently with the researcher. They also need common sense, sensitivity, tact, and courtesy. Peil et al. (1982: 134-136) suggests secondary school students, in preference to university students, as being often less arrogant and more reliable.

In Borno I used first year undergraduate students, and on the Plateau a mix of university students and secondary school leavers, recruited through the university. In both surveys a team of about one dozen local field assistants was found to be sufficient; allowing for absenteeism this usually secured a manageable 8-10 in the field on any day. On balance I found my Borno team more effective, perhaps because I worked with them over a long period and had known some of them prior to their recruitment. In both surveys, a degree of reliability was ensured by being present in every market in which interviewers worked.

In both Borno and the Plateau the participants in marketplace trade are male and female. In many small markets women predominate. One of the beauties of research in rural markets is that it allows interviews with women about their economic activities away from the home where male household heads may obtrude, even inadvertently by their mere presence, and thus restrict exploration of women's trading activities (Hill 1986: 143). It thus seemed important to obtain both male and female assistants for the trader survey. This turned out to be a crucial decision because some women traders, particularly in Borno, clearly preferred to be interviewed by women. In Borno, I was able to secure the assistance of only one woman; in this Moslem area in 1977 it was very difficult to find educated Kanuri women able to travel extensively. My assistant was a young divorcee from the local royal family, one of the university's first Kanuri women students. She travelled round the markets in simple local dress, most successfully interviewing and conversing informally with many poor rural Kanuri and Shuwa women, despite her very different background. My male field assistants, though mainly from urban privileged families, were similarly impressive in their competence, patience, and sensitivity to local courtesies and customs. In the Plateau study assistants had to be recruited very rapidly. They all happened to be Christians (this is a mixed Christian/Moslem area); half the team was female. In this case I had some difficulty at first in persuading female assistants to wear local dress appropriate to the rural markets where they were working; two rapidly dropped out but the remainder subsequently worked fairly effectively. On the Plateau I observed that, when given the opportunity to choose, many of my female assistants preferred to interview male traders, and my male assistants to interview women. Nonetheless, Whitehead and Brown (1986) emphasize the importance of using a team of male and female fieldworkers (for interviewing their own sex) in highly segregated societies where short-term fieldwork is proposed.

The Survey

Fieldwork in Borno and the Plateau can be divided into four phases.

A preliminary stage in which each district head in the selected survey

permission to work in the district, and be interviewed about the district's markets. This interview focused on basic factual information: a list of markets, day(s) held, approximate size and seasonal variations in size, opening times, status regarding wholesale/retail element, location, presence of specialized markets, market closures and reasons for closure, new markets and reasons for establishment, and the role of rural markets (and other outlets) in the evacuation of agricultural produce. Additional questions were asked in the Plateau study about the impact of the recent abolition of the marketing boards, and the value of middlemen in rural marketing (many district heads are involved in trade so not surprisingly responses to the latter question were strongly favorable). The District head normally gave the interview surrounded by members of his entourage, and the response to each question followed consultation with the group. Where disagreement occurred this was recorded and the issue was followed up elsewhere. Preliminary market histories were often elicited from the entourage for individual markets they knew well.

Often village heads were first encountered at the district head's house. District heads generally informed all village heads in the district about the project in advance of the market visits. In cases where markets were particularly remote and difficult to find, district heads often offered to provide a messenger to accompany the field team.

The visits to district heads were followed immediately by a *pilot run* of the main trader survey in one or two small markets. (The procedure followed is described in the Main Survey section below.)

This was followed by revision of the trader questionnaire, a review and weeding out of field assistants, and the construction of a (flexible) schedule of market visits. The latter had to take into account periodicity of market meetings, vehicle availability (4-wheel drive may be necessary for off-road markets), and access. In the case of a rainy season survey, it is important to bear in mind that markets may be virtually empty on days following heavy rain at the start of the planting season.

In the main survey of each rural market, the following structured (but flexible) procedure was adopted. Normally only one market was surveyed each day.

1. On market day proceed to the market with field assistants. In some cases it was necessary to take a representative of the LGC to the market, because of the difficulty of locating markets situated away from the tarred road. (Available maps are inadequate and bush routes change as roads deteriorate.)
2. Locate the village head's house. Often the village head was already in the market. His permission was requested, as a courtesy, before any interviewing

took place. Occasionally, the village head was absent from the village, in which case his deputy was approached.

3. Once permission had been obtained, the field assistants commenced interviewing traders selling in the market. Meanwhile the village head was interviewed. On a few occasions on the Plateau, field assistants attempted to save time by commencing their interviews before I had completed formalities with the village head, and in one of these, markets traders refused to answer questions until the village head had given his approval.

4. Move to the market (usually by this time approaching its peak) and fill in an observation sheet regarding access, site conditions, transport, and lorry/truck parking facilities, etc. Draw a plan of the market site indicating location of stalls and stall types with notes regarding sex of stall holder and goods on sale plus similar notes on perambulating hawkers; essentially a full count of all traders. In many cases the village head insisted on personally conducting a tour round the market, in which case it was necessary to delay drawing up the plan until later.

5. Talk informally (but using check lists of topics) to the market chief, to market committee members where committees existed, to some of the major traders (usually male), and to some of the women traders (if Hausa speakers). In quieter markets the field assistants also chatted informally with villagers and market participants once they had completed their questionnaires.

6. Take photographs.

7. Leave the market. On the Plateau everything had to be accomplished before about 4:30 p.m. Serious drinking tended to become a primary activity after this time among many market visitors and the atmosphere of the market changed. Presumably this is principally a feature of markets in the postharvest period on the Plateau.

8. On the journey back to base, discuss the market and obtain informal feedback from the field assistants (and driver) on their perceptions of the market, their interviews, etc. This debriefing proved very important. On the few occasions when I was unable to travel with the interviewers, I felt I obtained a much less complete picture of the market.

9. Each evening write up field notes and check through all data collected that day including trader interview schedules.

10. Pursue queries from 9 above with assistants on the journey to market the following morning. This was particularly important in the early stages of fieldwork.

Elaboration of some of the above points may be useful. The interview with village heads referred to in point 3 consisted principally of factual questions concerning the village market and the settlement; details of the market's age, functions, trade, seasonal variations in trade (including approximations of average trader numbers), change in trade over the past five years, opening times, age of stalls, facilities, site and changes of site, and fees charged. Questions were also asked about the village economy and history, about trade outside the marketplace, village trade associations, the effects of the abolition of the marketing boards (in the Plateau study), and public transport. Generally, as in the case of the District head interview, this was a group interview with ward heads, elders, and other villagers contributing to the discussion. As in the District head interviews, I found it useful to have an assistant ask questions and note responses, because this allowed me to observe more carefully and pick up nuances in the debate which I might otherwise have missed.

The trader questionnaire, discussed briefly in the pilot run section, was administered by field assistants, as a one-on-one interview, because it dealt with the specific details and experiences of individual traders. Where possible every trader selling in the market was questioned. In large markets this was not feasible, and an on-the-spot sampling strategy had to be devised to obtain as representative a sample for the market as possible. The difficulties of sampling in markets have been observed by others; in the Gambia, for example, Barrett (1988: 14) writes "a rigorous sampling procedure" was "impractical". In rural markets, which frequently take place on open ground with numerous entry and exit points, the problems are particularly great, especially where stalls are few and most traders simply arrange their sale goods on the ground or hawk them round the marketplace on their heads. In another example, Bromley (1980: 154) describes a sampling technique he used in Ecuadorian urban markets.

The trader interview schedule used in Nigeria was designed to explore details of the trader's background, and both trading and non-trading activities. Questions covered residence and place of birth, seasonal occupational variation, type and source of trade goods, pattern of market visitation, transport to market, purchases in the market, storage of goods, links with major regional markets, sales, prices, reasons for marketing, attitude to trading, trade problems, and membership of trade associations. In the Plateau survey, women were asked about restrictions imposed by husbands on their mobility.

Additional details were noted regarding age, sex, ethnic group, trade goods currently on sale, and stall type occupied. The questionnaires were all of a semi-structured type, incorporating a mix of closed and open questions. No precoding of data was attempted (i.e., coding on the questionnaire). The response rate was remarkably high, with very few reported refusals, especially on the Plateau where more women interviewers were available. We did not

to anticipate remuneration. However, we usually purchased refreshments during the day and some provisions before leaving the market. Sometimes I was given small gifts and reciprocated in kind (colorful postcards are useful for this purpose).

Much useful information was obtained informally (point 5) through conversations with traders toward the end of the market day, as business slackened. On some occasions in Borno, I was invited into compounds to meet the few secluded women (wives of richer men and office holders) who would otherwise have missed the excitement of visiting strangers and learned about compound-based trade. While this kind of information-gathering may appear to lack rigor, it provides a "texture" which cannot be obtained through formal questionnaire interviews, even of the semi-structured kind (Burgess 1982: 107-110).

I found photographs (point 6) a useful mnemonic device, but took them with caution and generally only toward the end of the market day when the market study was finished and traders familiar with the survey team. A second, Polaroid, camera was used to provide an instant photograph as a small gift to those photographed. Permission was always requested from individual traders (and only rarely refused) before proceeding. Photographs can be used as a research technique in markets. A study of 21 market sellers in a Lima marketplace used a photo-interview technique, a structured open-ended questionnaire, and a set of photographs of trading activities, to research women's marketing activities and their perceptions of their role in the marketplace (Bunster 1983).

The "write up" of field notes (point 9) was made in a journal kept at base to record more fully (and legibly) notes taken throughout the day in a separate field notebook. Additional notes reviewed progress, etc. The importance of systematic recording of this type is reviewed, for example, in Burgess (1982: 191-199) and was found to be invaluable.

The field research program discussed above is summarized in the following table.

Table 1. Procedures for rural periodic market field research.

Procedure	Data sought
Pre-survey	
Pre-field preparatory work:	
- library research	Background, especially selection of field study location
- archival research	
- contact local researchers	(research permission)
- contact local university	

Table 1. (continued)

Procedure	Data sought
Field-based preparatory work:	
- visit local government offices	(research permission)
- locate and visit markets	background of study area
- design questionnaires/schedules	
- recruit field assistants	
Field survey	
Preliminary stage:	
- visit district heads	(research permission) Factual information: market days, times, size, characteristics; views on markets and recent change
- pilot survey of trader questionnaire	
- revision of questionnaire	
Main survey: daily procedure (one market per day)	
Researcher	Field assistants
- pursue queries regarding previous day on journey to market	
- visit village head	(survey permission)
	- interview traders
	trader background, characteristics, and trading and non-trading activities
- interview village head and elders	Village and market history, economic profile
- fill in observation sheet	Physical conditions: access, site, lorry/truck park
- draw plans of site, stalls, and note perambulating traders	Stall location by type (sex of holder, goods on sale); Full count of all traders
- informal discussion with market committee, major traders, market women	- informal discussion with villagers and traders
	Miscellaneous information.
- take photographs	Visual record
Post survey	
At market	
depart market	

Table 1. (continued)

Researcher	Field assistant	Data sought
- complete field notes		Impressions of market
At base:		
- check interview data		
- write up field notes		

Analysis

This chapter has focused principally on field procedure, but a brief discussion of methods of data analysis may help to clarify the selection of approaches to inquiry in the field. In both the Borno and Plateau studies, a variety of analytical approaches were adopted, including basic cartographic analysis and cross-tabulation of the trader survey data using an SPSS program. These are discussed in turn below, each with reference to a particular research inquiry.

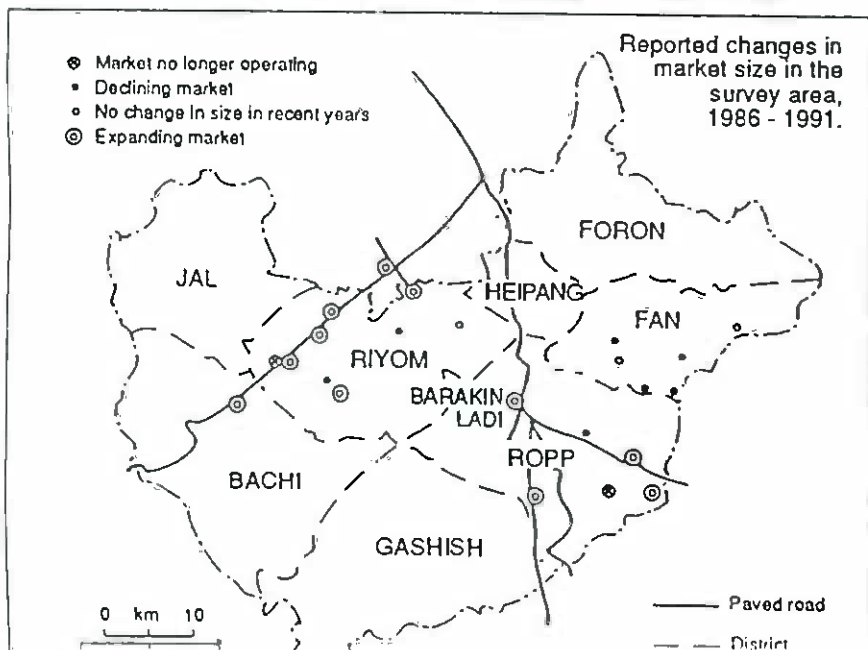
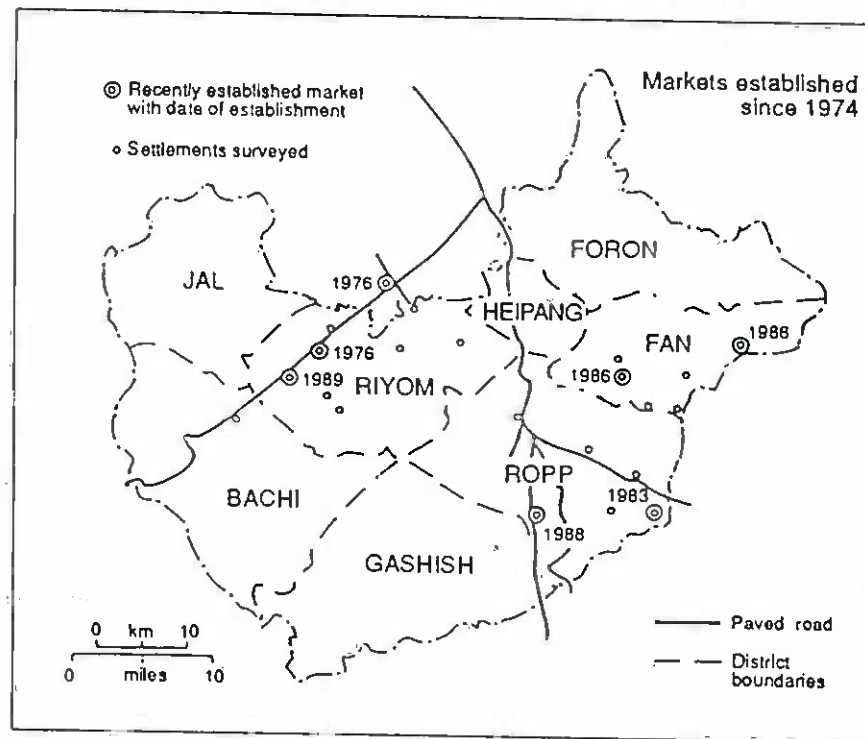
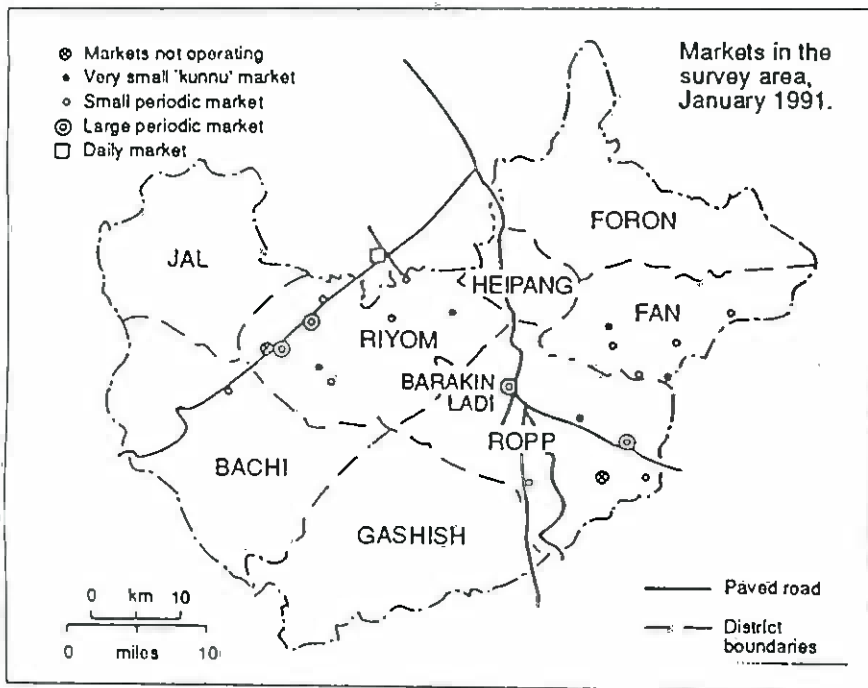
Spatio-temporal change and accessibility

Some indication of the pattern of spatio-temporal change in the market system can be ascertained through simple cartographic analysis of information gathered concerning market size, market establishment, and market closures. District heads, village heads, and elders were asked about change in their markets over the past five years, and traders were asked about their visits (when and how often) to the market in which they were interviewed. In Borno, a resurvey of the four survey districts was made in 1984, six years after the preliminary studies, allowing assessment of interim change in the market system. In both regions, mapping of estimates regarding size of market (in terms of trader attendance) at time of survey, changes in market size over the previous five years, and incidence of recent market establishment emphasized the paramount significance of road construction programs and the expansion of vehicle ownership in reshaping the rural periodic market systems (Porter 1986; 1988; 1993). Examples of maps constructed for the Plateau study are shown in Figure 2.

Gender patterns of trade

While there has been substantial work on women's trade in developing countries, fewer researchers have analyzed gender differences in trade, which can be considerable (Harts-Broekhuis and Verkoren 1987) and are important for understanding patterns of produce evacuation, etc. Analysis of the trader questionnaires in both Borno and the Plateau using an SPSS cross-tabulation program facilitated manipulation of simple gender comparisons for the data set in each study area as a whole, for individual markets, and for groups of markets

Figure 2. Maps illustrating aspects of spatio-temporal change in the Jos Plateau survey area.



(e.g., roadside vs. bush markets). In the Borno case, additional gender comparisons were constructed for wet and dry season markets and on the Plateau (where the trader population is ethnically diverse) for ethnic groups. Cross-tabulations were computed for sex by a whole range of variables including trade goods, mode of transport to market, distance traveled to market, frequency of market visits, trader types, and size of enterprise, and on the Plateau, reasons for trading and trader problems. The procedure for such analyses is straightforward and well documented. Two brief comments about computer analysis: I found it advisable to code all data myself in order to ensure consistency in categorization; and it is important to commence the exercise as early as possible after returning from the field for maximum recall.

Full details of the analyses are available (Porter 1986; 1988; 1993). In both study areas gender contrasts in mobility were particularly notable in terms of distance traveled to the interview market, mode of transport, frequency of visits to market, and frequency of visits to major regional markets. Females were considerably less mobile than men, though this gender distinction was more marked in Borno where Kanuri cultural conventions restricting female mobility are substantial. In both areas, distinctions in gender mobility have important implications in the context of changes in the market system induced

associated settlements has more serious implications for women than for men. Even if cultural conventions do not prevent lengthy journeys to distant roadside markets, the multifarious duties undertaken by women in addition to their marketing activities (reflected in the mobility patterns described above) present barriers to future trade.

Conclusion

The orientation of research described in this chapter is distinctly "bottom up", with the principal emphasis on learning from marketplace participants, male and female, many of whom operated on a very small scale indeed in the areas studied. The field method was shaped, inevitably, by resources and time availability. Post-field analysis (and reflection) indicated some of the shortcomings of the studies. In particular it highlighted the need for more research in settlements which have recently lost their markets. Such villages were visited by accident, not design, since the studies reported in this chapter were concerned with rural periodic markets per se.

Additionally, longitudinal studies—rarely carried out—or, at least, resurveys are vital if we are to gain a fuller understanding of the dynamics of rural periodic market systems. The extension of the Borno study over seven years made for a much clearer recognition of the significance of changing accessibility in market system dynamics.

Feedback is another area often inadequately considered and restricted by resource constraints.⁵ Yet it is important that those who give their time so freely supplying information be able to obtain some in return, if they want it. In the Plateau study, it was difficult to proceed in one village area because villagers were tired of providing information, and the village head and elders stressed their desire for feedback. In the event, a report on Plateau markets was prepared, together with a gazetteer of all markets and market settlements studied. The latter could be dismembered to provide relevant information for each market village. Copies were sent back to Jos for distribution. They appear to have reached LGC headquarters and district heads. The delay in funding of the next phase of the Jos Plateau Environmental Resource and Development Program has, unfortunately, led to redeployment of staff and it has not been possible to ascertain whether any villages received relevant sections of the report. There may be (should be?) a difficult decision in fieldwork regarding allocation of scarce funds between field study and feedback.

Finally, the critical role of rural periodic markets in the preliminary distribution of products from small scale farmers (and in the distribution of

consumption goods to those farmers) in many developing countries must be reiterated. Over the last decade the perceived failure of state intervention in produce marketing has brought increased reliance on traditional indigenous marketing and distribution systems, following the abolition of state marketing boards, etc. We need to know much more about the dynamics, potentialities, and limitations of rural periodic markets, for the rural marketplace is the point at which many of the poorest farmers in such countries sell their produce. This can only be achieved through careful field research.

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