

# **DE-AGRARIANISATION AND RURAL EMPLOYMENT NETWORK**

Afrika-Studiecentrum, Leiden  
Centre for Research and Documentation (CRD), Kano

## **If the Drumming Changes, the Dance Also Changes: De-agrarianisation and Rural Non-farm Employment in the Nigerian Savanna**

**Kate Meagher**

ASC Working Paper 40 / 1999

Copies may be ordered from:  
Afrika-Studiecentrum  
P.O. Box 9555  
2300 RB Leiden  
The Netherlands  
Fax 31-71-527-3344  
E-mail: [asc@fsw.leidenuniv.nl](mailto:asc@fsw.leidenuniv.nl)





## Preface

This working paper provides research findings emanating from the De-Agrarianisation and Rural Employment (DARE) Research Programme funded by the Dutch Ministry of Foreign Affairs and coordinated by the Afrika-Studiecentrum in conjunction with African research teams from institutions in Ethiopia, Nigeria, Tanzania and South Africa. We wish to acknowledge the encouragement of Hans Slot of the Ministry of Foreign Affairs and the editorial skills of Ann Reeves for providing vital back-up for the work of the programme's research teams.

Despite Sub-Saharan Africa's agrarian image, the rural peasant population is diminishing in relative size and significance. From a multi-disciplinary perspective, the DARE programme has sought to dissect the process of change, drawing attention to the new labour patterns and unfolding rural-urban relations now taking place. The programme research theme consists of four sub-themes: economic dynamics, spatial mobility and settlement patterns, social identity adaptations and gender transformations.

The objectives of the DARE programme have been to:

- 1) compare and contrast the process of de-agrarianisation in various rural areas of Africa in terms of a economic activity reorientation, occupational adjustment, social identification, and spatial relocation of rural dwellers away from strictly peasant modes of livelihood.
- 2) examine how risks on rural household production and exchange influence the extent and nature of non-agricultural activities in rural economies.
- 3) explore the inter-relationship between agriculture and the service sector in African economies; and
- 4) publish and disseminate the research findings to policy makers and scholars in Africa and elsewhere.

The Afrika-Studiecentrum's role has been to facilitate the formulation of country case study research in various rural African localities by African researchers, provide a discussion forum for work-in-progress, and assist in the publication and dissemination of completed analyses of research findings.

The following study by Kate Meagher is the product of collaboration between the Centre for Research and Documentation (CRD) in Kano and the Afrika-Studiecentrum. The specific objective of the research was to document the changing nature of rural livelihoods, links to urban areas and relationships between agricultural and non-agricultural work, with special emphasis on the evolution of informal economic activities.

The overall findings from the DARE programme are intended to provide insight into the processes of change which are moulding the livelihood prospects of African rural and urban dwellers of the next century. It is hoped that the knowledge gained may be useful for formulating more effective developmental policies to assist in short-circuiting Sub-Saharan Africa's current economic and political vulnerabilities.

Dr. Deborah Fahy Bryceson  
DARE Programme Coordinator



## TABLE OF CONTENTS

Acknowledgements	1
Introduction: The Story to be Told	2
Perspectives on the Rural Non-Farm Sector in Northern Nigeria	5
<i>Historical Perspectives: Non-Farm Activities and Agriculture in the Nigerian Savanna</i>	6
<i>Perspectives of the 1970s: Non-Farm Incomes, Agricultural Development and Rural Inequality</i>	8
<i>Perspectives of the 1980s and 1990s: The Role of Ecology, Policy and Economic Change</i>	11
Methodology	13
<i>Nasarawan Doya: A Village and a Setting</i>	14
<i>Research Methodology</i>	16
<i>Methodological Problems</i>	19
Agricultural Influences, Non-Farm Participation, and	
<b>Rural Differentiation</b>	21
<i>Household Characteristics</i>	21
<i>Access to Land</i>	26
<i>Inputs, Crop Prices and Cropping Choices</i>	29
<i>Perceptions of Agricultural Constraints and Prospects</i>	32
Non-Farm Activities and Structural Adjustment: An Enterprise	
<b>Perspective</b>	35
<i>The History of Non-Farm Activities in Nasarawan Doya</i>	35
<i>Current Patterns of Non-Farm Activities</i>	36
<i>Labour and Employment</i>	39
<i>Sources of Capital and Credit</i>	40
<i>Access to Inputs and Equipment</i>	42
<i>Demand-Side Factors: Competition and Markets</i>	44
<i>Incomes and Income Use</i>	45
<i>New Pressures and New Opportunities in the Non-Farm Sector</i>	45



## Acknowledgements

This study has been a true learning experience. Almost nothing went according to plan. But, as in all good learning experiences, the struggle has proved fruitful. It provided an opportunity for unforeseen rural realities to intrude themselves into my theoretical framework, with disorganising, but edifying consequences. It also provided an opportunity for me to experience the kindness and patience of the many people whose support made this study possible, with all its hitches. First and foremost, I would like to thank Deborah Bryceson of the Africa Studies Centre, Leiden, whose intellectual leadership and tireless fund-raising have helped to refocus empirical attention on the restructuring of African rural economies, and whose legendary patience has seen so many of us through the long task of working through our findings. I would also like to acknowledge the generous assistance of the Dutch Ministry of Foreign Affairs, who funded the project. I owe more than gratitude to my tireless research assistant, Ibrahim Mohammed. His commitment to the orderly conduct of the fieldwork was both heartening and indispensable. Thanks are equally due to Rufa'i Mohammed, Lauratu Usman, Hauwa Abubakar, and Raikiya, not only for their efforts in the field, but for the camaraderie they brought to the experience. For expert assistance with data entry and analysis, I am indebted to Danladi Jarma of the Institute for Agricultural Research, Ahmadu Bello University, Zaria, and Paul Griffiths of the Oxford University Computing Services.

The work would have been both slower and less thorough without the ready assistance of our many facilitators in Nassarawan Doya -- Alh. Dauda, 'Prince' Abdullahi, and Alh. Suleiman, to name just a few -- and we benefited greatly from the gracious cooperation of the late Sarki of Nasarawan Doya, who, sadly, passed away some months after the conclusion of the fieldwork. Last, but not least, I owe the substance of what I have learned to the people of Nassarawan Doya, who put up so calmly and hospitably with our comings and goings, our long interviews, our endless rounds of questions -- intrusions to which they have yielded so many times over the years, with little result. I thank them for their faith that, one day, something good may come of it.





## **If the Drumming Changes, the Dance Also Changes: De-agrarianisation and Rural Non-Farm Employment in the Nigerian Savannah**

The story began with the admission of the failure ... of industrialisation-led development strategies to generate income entitlements for the poor sufficiently fast and on a wide enough basis. Hopes were pinned on the new "bargain" sector, the rural non-farm economy. ...[However] the rural non-farm sector must not be viewed as a panacea for the fundamental problems of rural development and poverty alleviation. The problem of development is a problem of the whole; it cannot be solved by tinkering with a single part. (Saith 1992)

### **Introduction: The Story to be Told**

At the end of the dirt road leading into Nasarawan Doya, a Muslim Hausa village in the grain surplus region of the northern Nigerian savanna, there is a clearing that serves as a rendezvous point for transport down to the main road, a tarred federal highway running between the state capitals of Kano and Kaduna. A red minibus, owned by a man from a village some 50 km away, is normally parked there, waiting for a sufficient number of passengers to make the bumpy half-hour journey. At strategic times of day, a swarm of young men on motorcycles also wait for passengers going to the main road or out to the farms and hamlets along tracks too narrow for vehicles. In the shade of a small store house at the centre of the clearing, a line of young girls sell local snacks prepared by women from the village, the majority of whom pursue a range of non-agricultural activities from within the confines of the household, owing to the strict observation of the Islamic practice of wife seclusion.

To the left of the clearing as one enters the village is an abandoned dispensary which now serves as a police station for the lone police officer recently assigned to the village from the Local Government headquarters in the rural town of Makarfi. To the right stands the village's only bakery, owned by a local villager, but abandoned since 1992 owing to the unmanageably high cost of flour created by Nigeria's imposition of a ban on imported wheat in 1986. The bakery premises and machinery were rented in 1997 by two young Igbo men from Imo State in south-eastern Nigeria, who hope that the unbanning of wheat in 1992, and rapidly rising transport costs to the nearest town, have revived the demand for locally produced bread.

A commercial lodging, built like the village compounds around it of mud and cement with a traditional vaulted mud roof, stands at the far end of the clearing. One of the rooms is rented to a community health worker who works in the public clinic at the edge of the village. Two others are rented as a private clinic, opened during the meningitis epidemic of 1996 by a Yoruba nurse who works in a private hospital in Zaria, 35 km away. However, business has fallen off since end of the epidemic, leading to the temporary closure of the clinic for the rest of the year, and

throughout the whole of 1997.

The commercial lodging is owned by a well-to-do villager who lives in the adjacent compound, and who, in addition to wet and dry season farming and livestock holdings, earns significant additional income from rent, commercial operation of a grinding machine and the artisanal production of local sugar, for which he has acquired four horses and two sugarcane crushing machines. Three of his four secluded wives also bring in cash incomes from the production and sale of a range of local snacks, as well as seasonal crop trading. The fourth, and youngest, wife was obliged to abandon local snack production in 1996 when the marriage of her daughter deprived her of her sales agent. She now performs wage labour for the snack production enterprise of one of the other wives.

The frontage of the commercial lodging is whitewashed and zinc roofed. A row of lock-up stalls run the length of it, with a chemist shop at the far end. The chemist is run by another young Igbo from Abia State, who came to northern Nigeria a few years ago to work in his brother's chemist in Tashin Yari, a village cum way station 10 km up the main road. They set up a chemist shop in Nasarawan Doya in 1995 as a branch of the main shop in Tashin Yari. The chemist is a favourite gathering point for the village youth, including one Yoruba from south-western Nigeria who opened a small provisions shop a couple of years ago and since then has been given land in the village to farm.

Old men normally gather for much of the day on the zinc-roofed porch beside the chemist while the able-bodied men are at the farm. In the mornings they buy breakfast porridge and fried bean cakes from passing sales girls retailing their secluded mothers' wares. In the early afternoon, they buy *fura*, a local midday meal of millet and soured milk sold by pastoral Fulani women from the outlying hamlets.

Another commercial lodging, a little deeper inside the village is rented largely by single young men who work at the toll gate near Tashin Yari on the main road. The toll gate was previously federally owned, but was sold during the recent privatisation exercise to a wealthy businessman from Nasarawan Doya, who currently resides in Zaria city, and in 1997 became the Local Government Chairman of Makarfi under the banner of General Sani Abacha's dubious (and recently annulled) local government elections. He has since been made Village Head of Nasarawan Doya, as well as District Head of the newly created administrative district to which Nasarawan Doya belongs.

Nearby, a blacksmith works on agricultural implements, repairs bicycles, motorcycles and grinding machines, as well as producing bicycle seats for sale. He belongs to the only smithing family in Nasarawan Doya and all the surrounding villages, which has sustained demand for his services, but his earnings and capital have declined over the past decade owing to the increasing cost and scarcity of scrap metal. From his earnings as a blacksmith, he hires labour to farm for him, though he relies very little on farming for his livelihood.

During the wet season, men and youths drift in from the farm from mid-afternoon on. In addition to farming for themselves, many of the youths also engage in agricultural wage labour

to build up capital to buy land, get married, and start up their own non-agricultural activity. The available pool of agricultural wage labour is further swelled by migrant labourers and Koranic students from the drier areas of Kano and Katsina State to the north, who come to the village to study with local scholars, and may be used on the farm by their teacher, or hired out to others. During the dry season, migrant labourers from southern Kaduna State drift into the village to find work on dry season farms.

Most of the local men pursue a range of non-farm activities, both within and outside the village. At the beginning of the dry season, the production and trading of local sugar, made in the form of small brown cakes from locally produced sugarcane, is currently one of the most lucrative activities, and is pursued at varying levels by at least one third of resident households. Since the imposition of structural adjustment, the rising price of imported sugar has created an expanding demand for local sugar in the rural as well as urban areas of northern Nigeria. A wide range of other activities are pursued, both seasonally, and, increasingly throughout the year. Those with some capital or technical skills engage in such activities as crop trading to regional markets, and even down to Lagos, trade in provisions, bicycle or radio repair, or transport. Those with little capital engage in agricultural wage labour, load carrying, and a range of traditional crafts, from the embroidery of traditional caps to local building.

Diversification into a range of non-farm activities is nothing new in Nasarawan Doya. In the semi-arid environment of the Nigerian savanna, the rural economy has for centuries involved the interdependence of agricultural and non-farm activities. However, the role of such activities in local livelihood and accumulation strategies has changed significantly in the decade since the imposition of Nigeria's Structural Adjustment Programme in 1986. Dramatic increases in the cost of living and in agricultural input prices have increased the importance of non-farm incomes for meeting household needs as well as for funding agricultural production. The economic pressures of adjustment have undermined the profitability of both local agriculture and a range of non-farm activities which have been caught on the wrong side of shifting terms of trade. Adjustment has also created some new opportunities, for those with sufficient capital to take them up. Rising crop prices and declining rural and urban incomes have stimulated demand for a narrow range of local goods and services. The overall impact of these changes on local agriculture, non-farm incomes and rural livelihood strategies has been extremely varied, depending largely on the socio-economic position of households. An analysis of the nature and developmental implications of these changes, with a focus on the role of non-farm activities, is the subject of this study.

A central question underlying the study is whether the changes taking place in Nasarawan Doya simply represent modern variations of the age-old practice of combining agricultural and non-agricultural activities, or a trend toward an overall decline in the importance of agriculture in the rural economy of northern Nigeria. Growing evidence of a movement away from agriculturally-based livelihoods in rural Africa -- a process recently labelled 'de-agrarianisation' (Bryceson 1996) -- raises important questions about the economic forces that might be

propelling such a trend, as well as the economic potential of the activities replacing agriculture as the central source of rural livelihoods. Thus, if the first question is whether deagrarianisation is indeed taking place in Nasarawan Doya, the second question revolves around the developmental implications of this process, both at the level of individual and household livelihood strategies, and at the wider sectoral and regional levels.

The groundwork for this study will be set by an exploration of the general theoretical issues relating to the African non-farm sector and its implications for agricultural and rural development, followed by a review of the historical and theoretical literature on the role of the non-farm sector in northern Nigeria. This will launch us into the empirical core of the study, which will begin with a description of the village setting and the research methodology. The subsequent presentation and analysis of the research findings is divided into five parts. The first will consider the changes in the agricultural economy of the village which have influenced the development of the non-farm sector. This will be followed by a consideration, from an enterprise perspective, of the impact of structural adjustment on the development of the non-farm sector. The analysis will then shift to a household and community perspective to look at the role of non-farm activities in village livelihood strategies and occupational identities. In the following section, attention will turn to the role of non-farm activities in household welfare strategies, and the wider role of social networks in the development of the non-farm sector. Finally, a concluding section will attempt to draw out the theoretical, empirical and policy implications of the study.

### **Perspectives on the Rural Non-Farm Sector in Northern Nigeria**

Non-farm activities have always played a significant role in the rural economy of the northern Nigerian savannah. A number of ecological, historical, cultural and socio-economic factors have contributed to their importance. Ecologically, non-farm activities are a critical factor in accommodating to the intense seasonality and uncertainty of the region. The climate of the guinea savannah is characterised by a long dry season, lasting three to five months, and is plagued by uncertain rainfall and intermittent drought. During the dry season, and in periods of poor harvests, rural inhabitants rely on non-farm sources of income to meet their household and other needs.

The interaction of cultural and political factors with the changing economic and policy context of the 20th century have tended, on the whole, to reinforce the importance of non-farm incomes. The savannah area of northern Nigeria is inhabited by the Hausa-Fulani, who are predominantly Muslim. The influence of Islamic inheritance practices, the pre-colonial state system of the Hausa, and the development of commercial food crop agriculture since the beginning of the colonial period have combined to make access to land and labour more vulnerable to commercialisation. This has tended to increase the importance of non-farm incomes, particularly among poor farmers. However, the shifting policy context of the colonial, independence and structural adjustment eras has produced significant fluctuations in the

importance of non-farm activities relative to agriculture, particularly among wealthy farming households. These developments will be analysed in the context of a review of the historical and theoretical literature on non-farm activities in the Nigerian savanna.

### ***Historical Perspectives: Non-Farm Activities and Agriculture in the Nigerian Savanna***

In the Nigerian savanna, a long history of urbanisation and long-distance trade, which predates the colonial era by centuries, has contributed to the development of a wide range of non-farm activities. Both the manufacturing and trading activities associated with the prominence of such urban centres as Kano and Katsina involved extensive participation of rural artisans and traders. In particular, the central role of the Hausa in the kola, grain and livestock trades has resulted in a long history of circulation of rural inhabitants throughout the north of Nigeria, and south along the major trade routes as far as Lagos (Lovejoy 1980; Baier 1980; Cohen 1969; Hill 1977; Watts 1983). Rural inhabitants also played a central role in the spinning, weaving and dyeing processes of cotton cloth production, a major industry and important export of the pre-colonial Hausa states of the central savanna. In addition, rural dwellers were involved in a range of local crafts such as blacksmithing, pottery, building, mat making, and other activities oriented toward the production of items for household and agricultural uses.

A wide range of studies point to a collapse of economic opportunities in the rural non-farm sector in the early years of colonialism, a period characterised by policy measures to promote the expansion of commercial grain production and export agriculture (Hill 1978; Mustapha 1990; Bello 1982; Watts 1983). The early colonial period, which in northern Nigeria dates from the beginning of the twentieth century, witnessed the destruction of local crafts, owing to competition from imports and the deliberate suppression of certain activities by the colonial authorities, notably indigenous sugar and cloth production. These activities were felt to interfere with the production of varieties of sugar cane and cotton more suited to colonial industrial uses.

A countervailing trend which also dates from the colonial period involves the long-term shift of women's income generation toward non-agricultural activities. From the 1930s, the spread of the practice of seclusion into the rural areas has combined with the ongoing conversion to Islam of many Hausa practitioners of traditional religion, which has served to limit female participation in agriculture (Jackson 1985).

Trends toward a declining role of non-farm incomes appear to have been reversed by the policy environment of the Nigerian Oil Boom, which dates from the early 1970s. Evidence indicates a shift in favour of non-farm incomes, in the context of urban biased development policies, discouraging terms of trade in agriculture, the pressures of agricultural commercialisation, and rapacious policies of land acquisition for agricultural development schemes, state farms, private commercial agriculture and construction of educational and other institutions (Beckman 1987; Iliya & Swindell 1997). The result was an increase in landlessness or inadequate holdings, and high levels of rural-urban migration.

According to Jackson (1985), the economic and policy environment of the 1970s also encouraged a further shift of rural women's activities in favour of the non-farm sector. Agricultural development programmes and large-scale irrigation schemes tended to further erode women's already restricted control of agricultural resources, while simultaneously expanding the profitability of women's non-farm activities, accentuating women's emphasis on non-farm sources of income.

It should be noted that the evidence regarding declining terms of trade in agriculture during the 1970s is mixed. Clough & Williams (1987) and Beckman (1987) argue that rapid urbanisation, accelerating food price inflation and expanding markets for grain smuggling into Niger created expanding opportunities in the grain-based agriculture of the Nigerian savanna. This was, however, accompanied by the collapse of groundnut production, northern Nigeria's major export crop, and a dramatic expansion in the opportunities for non-farm incomes in the context of the Nigerian Oil Boom. Furthermore, the capacity to benefit from opportunities in commercial grain production was determined by access to labour, modern inputs, and high value urban, and cross-border markets -- advantages biased heavily in favour of wealthy rural households, particularly in the context of the inflationary pressures of the Oil Boom (Meagher & Ogunwale 1994). Despite the development of profitable opportunities in commercial grain production, expanding opportunities in the non-farm sector appear to have been more attractive, since evidence suggests that, at least in larger villages and periurban areas, the reliance on non-farm incomes was highest among wealthy households during this period (Matlon 1977; Iliya & Swindell 1997).

The onset of economic crisis in the early 1980s brought about a contraction in both agricultural and non-farm opportunities. This appears to have provoked a rising share of non-farm incomes, in the context of a decline in overall income-generating options (Berry 1993a; Iliya & Swindell 1997). Following the imposition of Nigeria's Structural Adjustment Programme in 1986, the available evidence suggests that the income strategies of wealthier farmers shifted back in favour of agriculture. It should be noted that Nigeria's Structural Adjustment Programme, while containing many of the standard measures such as devaluation, trade and price liberalisation, elimination of agricultural marketing boards, and elimination or reduction of a range of subsidies, also involved a range of distinctly illiberal measures which ran counter to the free-market logic of structural adjustment. These included distinctly pro-agricultural policies such as the imposition of bans on imports of rice, maize, wheat and barley, and the maintenance (despite attempts at reduction) of high subsidies on fertiliser (the most critical input for grain production in the savanna), and petrol. Thus, in the face of a contraction of the urban economy under adjustment, the overall profitability of grain agriculture was initially increased by a combination of grain import bans, the creation of incentives for local sourcing of agro-industrial crops, and the stimulating effect of liberalisation and devaluation on the cross-border grain trade with Niger (Andrae & Beckman 1987; Meagher & Ogunwale 1994). This created a situation of rising grain prices and expanding markets, in the context of

more moderate rises in the cost of subsidised inputs, for those who could get them.

Unfortunately, small- and medium-scale households once again found themselves caught on the wrong side of the terms of trade. The high level of food deficit households in the Nigerian savanna, ranging between 10-20 per cent of households even in good years, lost rather than benefited from rising grain prices (Matlon 1977; Meagher 1991). Moreover, the vast majority of farming households lacked access to significant quantities of subsidised fertiliser, leaving them at the mercy of fertiliser distributed via the open market. Even among grain surplus producers, rising grain prices were unable to keep pace with the increase in the open market price of fertiliser, except among farmers who had the resources and connections to gain access to large quantities of subsidised inputs, or to high-value urban or cross-border markets for their crops (Meagher & Mustapha 1997; Meagher *et al.* 1996).

Women were also differentially affected by structural adjustment. Despite the constraints of seclusion, better-off women could fund access to land, labour and inputs in order to seize new opportunities in agriculture. They were also better placed to benefit from state and NGO initiatives to encourage female participation in agriculture (Lennihan 1994; Meagher forthcoming). Women from poorer households, however, lacked the capital to take up agricultural opportunities, and were also less able to sustain their non-farm activities in the face of the inflationary pressures of adjustment. The result was that the majority of women were forced in increasing numbers into a limited range of low-income non-farm activities (Meagher & Mustapha 1997).

These shifting historical trends raise questions about the role of the non-farm sector in northern Nigerian rural development, as well as its impact on rural social inequality. Does a shift of economic strategies in favour of non-farm incomes reflect a decline in the agricultural sector, or an increase in opportunities for income generation and accumulation among rural dwellers? Are these shifts in economic strategy governed largely by policy, or by longer term structural and ecological factors within the rural economy? Do some strata of rural society benefit more from access to non-farm activities than others? What follows is a consideration of the northern Nigerian theoretical debates generated by these issues, with a focus on the major shifts in theoretical concerns between the developmentalist era of the 1970s, and the era of crisis and structural adjustment, which in Nigeria dates from the early 1980s.

### ***Perspectives of the 1970s: Non-Farm Incomes, Agricultural Development and Rural Inequality***

The agricultural economy of the Nigerian savanna was studied extensively from the late 1960s, owing in large part to the activities of the Institute of Agricultural Research, founded in Zaria in the early 1960s. While the primary focus of this research was agricultural, non-farm activities were recognised as significant components of rural incomes in northern Nigeria by the late 1960s and early 1970s. In two separate studies carried out in villages around Zaria and in south-western Kano State, 'off-farm' sources were found to account for one quarter of total

household income, and 50-60 per cent of cash incomes (Norman 1973; Matlon 1977). Both studies recognised that these figures under-represented the actual share of non-farm incomes, owing to the omission of data on women's incomes, which are almost exclusively non-agricultural (Matlon 1979; Norman *et al.* 1982).

In these early studies, exposure to the 'modern' forces of the urban economy was regarded as a central determinant of the types of non-farm activities available, and of their share in the incomes of high-income households. In relatively remote villages, traditional activities dominated the non-farm sector, and non-farm earnings were lower, owing to weak markets and the narrow range of non-farm opportunities (Norman *et al.* 1982; Simmons 1975). Matlon (1977) noted that the lower share of non-farm incomes in remote villages was particularly marked in the case of wealthy households, who lacked access to the lucrative opportunities available in larger, more commercialised villages. In villages closer to urban centres, traditional crafts and services were undermined by competition from 'modern' substitutes, and a range of modern non-farm activities arose in the context of greater access to public and private sector employment as well as access to modern technology and inputs. In the long term, it was felt that increasing population pressure on land, combined with the low level of indigenous agricultural technology, would tend to increase the importance of non-farm incomes in total household incomes, unless efforts were made to increase the levels of agricultural technology through the introduction of improved inputs (Norman 1973; Matlon 1979).

The 1970s represented a period of intense academic activity on issues relating to northern Nigerian agriculture, not only within agricultural disciplines, but from the perspectives of such disciplines as sociology, and political science. This plethora of academic activity generated a heated debate concerning the impact of agricultural modernisation and commercialisation on northern Nigerian rural society. Critical differences in perspective arose concerning the impact of non-farm activities on agriculture and on rural differentiation. On one side were those who argued that non-farm activities were essentially complementary with agricultural production, and limited rural differentiation (Hill 1972; Clough & Williams 1987; Norman 1973; Mortimore 1989). It was felt that the non-farm sector absorbed surplus labour, particularly in the off-season, among marginal farmers, and in times of poor rainfall, as well as contributing resources for agricultural intensification. Agricultural wage labour, which was regarded as a component of 'off-farm' income was not seen to pose any threat to the persistence of peasant farming, since the low cash resources of labour-hiring farmers, and the own-farm demands of agricultural labourers, restricted the demand and supply of wage labour (Norman 1973; Williams 1988).

On the other side of the debate, it was argued that non-farm incomes tended to widen income disparities, undermine peasant agriculture and reinforce rural differentiation (Matlon 1977; Beckman 1987; Watts 1983). Matlon's (1977) data on rural Kano indicated that economic barriers to entry tended to exclude low-income households from the more lucrative non-farm activities, restricting them to a range of low income service activities. Moreover, data from



villages around Zaria indicated that participation in non-farm activities, particularly agricultural wage labour, was found to undermine agricultural production among poorer households by diverting their efforts from agriculture, especially during the peak farming season, reinforcing their dependence on non-farm activities (Lennihan 1987; see also Berry 1993a on southern Nigeria). In rural Kano, Matlon (1979) found that during the peak agricultural season, low-income males spent 22 per cent of their time in non-farm activities, compared to only 5 per cent among males from wealthy households.

Increasing awareness of the importance of women's incomes added a gender dimension to debates about the impact of non-farm incomes on rural inequality. Although the majority of Hausa women were largely excluded from agriculture by the rules of female seclusion, studies conducted during the course of the 1970s revealed a surprising degree of economic activity among secluded women (Simmons 1975; Hill 1969; Jackson 1985). Variations in the nature of and participation in female seclusion permitted limited female participation in agriculture, particularly among very poor households, post-menopausal women, women living outside nucleated rural settlements, and the non-Muslim Hausa (Meagher forthcoming; Imam 1993). Women also played an important role in the raising of small stock, such as sheep and goats, but this was largely a means of savings rather than income generation (Simmons 1975). But far more significant were a range of non-agricultural activities, based largely on agricultural processing, and a more limited participation in small-scale trade and local crafts. Access to inputs and circulation of goods was carried out through the agency of husbands, children or fostered children. In a study of over 400 women in three Zaria villages, Simmons (1975) found that at the time of interview, 95 per cent of adult women were working in some form of income earning activity, 90 per cent of them being involved in some form of food processing.

There was some disagreement as to the importance of women's incomes in overall household income, and their impact on rural income inequality. Hill (1977), Matlon (1978), and Norman *et al.* (1982) claimed that the economic role of women mitigated against the forces of differentiation. Matlon noted an inverse relationship between levels of female involvement in income-generating activities and the overall income status of households, concluding that women from poorer households increased their levels of employment to compensate for inadequate male incomes. Watts (1983), on the other hand, argued that the withdrawal of female labour from farm work as a result of seclusion aggravated the serious labour constraint of poor households, a constraint which was unlikely to be compensated for by the limited incomes women were able to generate from within the confines of seclusion. Moreover, women's financial assistance to their husbands was normally made in the form of short term credit, for which full repayment was expected. The economic role of women was therefore seen to reinforce rural income inequality and to accelerate the dependence of poorer households on non-farm sources of income.

Assessments of the long-term potential of non-farm incomes in the rural development process were less neatly polarised than debates about the role of non-farm incomes in rural

inequality. Norman (1973) maintained that non-farm activities had a potential for labour absorption and poverty alleviation, but had little long-term potential for raising rural incomes. Others argued that non-farm incomes provided important opportunities for income improvements and accumulation, though the redistributive pressures of the rural social system prevented this from translating into social differentiation (Clough & Williams 1987; Williams 1988). Still others felt that non-farm incomes could play a role in raising rural incomes by helping to overcome capital constraints among the poor, and providing lucrative opportunities for wealthy farmers (Matlon 1979). A final position held that non-farm incomes contributed to processes which undermine peasant agriculture (Mustapha 1990; Beckman 1987; Wallace 1978), and, in the extreme formulation, would contribute to the elimination of the peasantry (Watts 1983). Common to most of these positions, however, was a perception that a sustained increase in the share of non-farm incomes in total rural incomes reflected impediments to investment in agriculture and represented a negative trend in agricultural as well as rural development. The engine of rural growth was perceived to lie in agriculture, and non-agricultural incomes were perceived as developmental only insofar as they contributed to increasing the ability of households to invest in agriculture.

### ***Perspectives of the 1980s and 1990s: The Role of Ecology, Policy, and Economic Change***

By the 1980s, there was a growing recognition in the northern Nigerian literature that factors other than agricultural technology, population pressure on land and the gender division of labour affected the role of non-farm activities in rural income-generation. Increasing concerns about the environmental sustainability of African agriculture, and the dramatic impact of economic crisis and structural adjustment drew attention to the role of ecology, policy, and household livelihood strategies in determining the economic importance of the non-farm sector. While previous studies showed an awareness of the relationship between ecological factors and activity patterns, the concern with desertification and sustainability emerged as central policy issue during the late 1970s and early 1980s, largely as a result of the severe 1972-74 Sahelian drought, and subsequent evidence of declining rainfall patterns since the early 1970s. The growing economic crisis from the early 1980s, and the imposition of structural adjustment, have served to intensify the policy concern with issues of adaptation and sustainability of rural livelihoods. As a result, the focus of research on non-farm activities has shifted from trajectories of sectoral change, to more flexible processes of adaptation to variations in climatic and economic conditions.

From the perspective of ecology, Mortimore (1989) focused on the ways in which non-farm incomes contribute to the sustainability of agriculture in a fragile agricultural environment. He argued that non-farm incomes, earned largely through patterns of cyclical migration, represent a form of adaptation to an agricultural environment characterised by uncertain rainfall and cycles of drought. Meteorological evidence has shown declining rainfall levels since the

early 1970s in the sahel savanna of the far north of Nigeria, forcing an increased dependence on non-farm sources of income (Mortimore 1989; Mustapha & Meagher 1992). In the guinea savanna immediately to the south, there is no evidence of a decline in annual rainfall levels, but the area is troubled by an increasing unreliability in rainfall patterns, which has a negative effect on crop yields. Within this context, a shift in favour of non-farm incomes reflects a stabilising force within the rural economy.

An alternative perspective has emphasised the role of policy and economic change in determining trends in the relationship between agricultural and non-farm incomes. Lubeck (1987) for example challenged the notion that shifts between agricultural and non-farm incomes represent timeless adaptive processes unaffected by economic and social constraints created by the prevailing policy environment. He pointed out that, owing to the very limited penetration of Western education and technical skills in the rural areas of the Islamic north, the urban income-generating options of the majority of Hausa migrants are concentrated in a narrow range of marginal service activities (see also Meagher 1997; Meagher & Yunusa 1996). The coincidence of the inflationary pressures of the Nigerian Oil Boom and subsequent economic crisis with a sustained period of declining rainfall and drought put severe pressure on the incomes from these marginal urban activities. These tensions erupted in a series of violent riots in the early 1980s and again in the 1990s, which have increasingly been targeted at the more technically skilled and economically successful Igbo migrants from southern Nigeria. Berry's (1993a) work on south-western Nigeria also suggests that the uncertainty and agricultural instability created by economic crisis and adjustment tends to increase the dependence of rural households on non-farm incomes, often with undesirable consequences for local ecological management practices.

Long-term perspectives on the role of policy in determining the relationship of farm to non-farm incomes reveal an increasingly complex picture. Recent studies by Meagher & Mustapha (1997) and Iliya & Swindell (1997) indicate that movements between agricultural and non-agricultural incomes in northern Nigeria are neither recent nor uni-directional, nor do such shifts tend to be consistent across socio-economic strata. Both studies argue that dependence on non-farm incomes rose during the Oil Boom years of the 1970s, and began to decline from the early 1980s owing largely to the contraction of urban non-farm opportunities and rising prices of agricultural commodities in the context of crisis and structural adjustment. Iliya & Swindell speak of a process of 're-agrarianisation' since the imposition of structural adjustment -- a trend influenced less by agricultural liberalisation than by the more illiberal measures of Nigeria's structural adjustment programme, including the bans on grain imports and the maintenance of subsidies on officially distributed fertiliser.

However, both studies argue that the overall shift in favour of agricultural incomes masks divergent tendencies among different strata of the rural population. Wealthy households show a marked decline in the share of non-farm incomes, owing to the rising profitability of grain and irrigated crop production since the mid-1980s. Poor households show the reverse tendency -- a marked rise in the share of non-farm incomes -- owing to a lack of resources necessary to shift

their livelihood strategies back in favour of agriculture in the context of rapid inflation in land, labour and input prices, combined with the rising cost of living. Households in the middle group show mixed tendencies. In both studies, attention is drawn to the superior capacity of wealthy households to maintain access to land, labour and capital in the face of rapid changes in economic and policy conditions. Iliya & Swindell, who focus largely on peri-urban areas, emphasise the critical role of political patronage and wealth accumulated through remittances from salaried jobs. Meagher and Mustapha, who consider villages located deeper in the rural areas, focus on the importance of wealth accumulated through rural activities, primarily trade and agriculture, as well as control of and investment in a range of rural social networks.

The impact of structural adjustment on economic relations within rural households has also received some attention in the literature on northern Nigeria. The central focus relates to the impact of adjustment on women's non-farm activities, pressures toward increased economic responsibilities within the household, and the extent to which women are able to seize increased opportunities in agriculture. Meagher (forthcoming) and Meagher & Mustapha (1997) cite evidence of squeezed profits in the bulk of women's non-farm activities, owing to rising input costs and weakening markets. Lennihan (1994) and Meagher (forthcoming) have noted a limited trend toward 're-agrarianisation' among wealthier Hausa women in response to a range of state incentives and the rising profitability of commercial agriculture. The limitations of female seclusion tend to restrict this option to wealthy women, owing to the necessity of farming entirely through hired labour. Imam (1993) and Meagher (forthcoming) consider the ways in which the continued practice of seclusion, and the ideological framework of male household provisioning which supports it, mask an increasing shift of the pressures of household provisioning onto women, particularly those from poorer households.

Whether the analysis focuses on ecology, state policy or relations within the household, a critical point that emerges is that the changing role of non-farm incomes in rural livelihoods is not a costless process. It involves the intensification of tensions over access to resources and opportunities, at the level of the household, the community, and the wider society. The study that follows will consider how the changing relationships between the agricultural and non-farm sectors have played themselves out in the village of Nasarawan Doya in the economic and policy context of the late 1990s.

## **Methodology**

Coming to grips with the wide range of factors that influence the role of the non-farm activities in the rural economy of northern Nigeria is an enormously complex process, which has occasioned a complex, and at times torturous, study. As the preceding literature review has indicated, one is not confronting a unilineal developmental or degenerative process, but a labyrinth of historical, cultural, economic and policy factors which have produced oscillating terms of trade between agricultural and non-farm activities, with differing consequences for various strata of the rural population. Attempting to reflect these complexities within the context

of a single study posed a powerful methodological challenge.

The aim of the study was to investigate the role of the non-farm economy in a manner which would capture both the broad economic trends, and the differentiating or contextual features of class, gender, ethnicity, community, ecology and policy change which give social and historical depth to the economic data. This required the collection of detailed quantitative economic data on households as well as non-farm enterprises, while maintaining a sensitivity to the myriad structural, cultural and historical factors which have shaped the trends in the non-farm economy. The difficulties encountered in accomplishing this task are reflected in the complicated structure of samples, the wide-ranging categories of data collection, and the sometimes convoluted structure of the study necessary to knit together a comprehensive narrative from an astonishing range and diversity of material.

What follows represents an attempt to orient the reader before launching into the study itself. The orientation begins with a description of the setting of the study, which involves the presentation of the village of Nasarawan Doya as a geographical, historical and social entity. This is followed by an explanation of the methodology of the study, involving a definition of key concepts and a justification of the methods used. Finally, some of the central methodological problems encountered in the course of the research and subsequent analysis are highlighted, with a view to identifying the limitations of the data presented.

### *Nasarawan Doya: A Village and a Setting*

The village of Nasarawan Doya is located in northern Kaduna State, in the grain-based agricultural surplus region of northern Nigeria known as the northern Guinea savanna. The region is characterised by a relatively short and unreliable rainy season, extending from April to September, and a long dry season. Average annual rainfall in the area around Nasarawan Doya is approximately 900 mm. Nasarawan Doya enjoys fairly good access to a range of rural and urban market centres. Just over five kilometres of semi-motorable dirt road separate Nasarawan Doya from the federally maintained highway linking the urban centres of Kano and Kaduna, both of which lie over 100 km from the village in opposite directions. Zaria, the closest urban centre and traditional capital of the area, is 35 km from Nasarawan Doya. 13 km in the opposite direction lies the rural market town of Makarfi, a major rural bulking market for agricultural crops, and the headquarters of the Local Government Area.

A 1996 assessment registered the population of Nasarawan Doya as 12,625 inhabitants. The bulk of the population are Hausa-Fulani, a Muslim Hausa-speaking group composed of Islamised Hausa and settled Fulani peoples. In the outlying hamlets are also small pockets of Christian Hausa, and semi-settled and nomadic Fulani, which constitute collectively less than 10 percent of the total village population. There are also a couple of households from other regions of Nigeria -- largely of Igbo and Yoruba origins -- as well as a handful of single young men from various parts of northern and southern Nigeria, all of whom have come to Nasarawan Doya to pursue a range of non-farm activities.

Farming, for consumption and sale, is the major source of livelihood in the village. The area around the village is suited to both upland farming (*tudu*) and small-scale river-bottom irrigated farming (*fadama*), which permits extensive dry season agriculture. The staple crops grown in the area are sorghum and maize, which are also important cash crops. The other major cash crops of the area are sugar cane, peppers, rice, groundnuts, cowpeas, and soyabeans. Farming is predominantly a male activity in Nasarawan Doya, owing to the practice of a strict form of female seclusion among the Muslim Hausa-Fulani majority. Among Hausa-Fulani women, direct participation in farming can only be undertaken via household or hired labour, or by women past child-bearing age. Female seclusion is not practised among the Christian Hausa and pastoral Fulani, and Christian Hausa women in particular are active in farming.

Livestock production is also widely practised, predominantly involving cattle, sheep, goats and chickens. Unusually for this part of rural northern Nigeria, roughly one third of the households also own at least one horse, which is used to operate sugar cane crushing machines. While livestock production plays a central role in the livelihoods of the pastoral Fulani in the outlying hamlets, it is of fairly minor overall importance as a source of income generation in the village. The economic role of non-farm activities is much more significant. A wide range of non-farm activities are also practised by the inhabitants, ranging from agricultural wage labour, traditional crafts and petty trade, to large-scale crop trading, local sugar production, modern crafts and a limited number of salaried positions in nearby rural and urban centres.

Nasarawan Doya was founded in the late 18th century by migrants from Katsina, Kano, Gobir and Niger. It is composed of four wards, three of which are clustered in the town centre, while the remaining ward encompasses a range of scattered hamlets on the outskirts of the main centre. The village has a weekly market, which was established about 100 years ago. The market is held on Fridays, and attracts traders and consumers from the surrounding villages, from the rural town of Makarfi, as well as from the urban centres of Zaria and Kano. The market is particularly known as a source of sorghum and maize. The village also has 24 local shops, specialising in household consumer goods (known locally as 'provisions') and used clothing, as well as two chemists.

Nasarawan Doya has a range of public facilities, but most of them are barely operational. The village primary school, established in 1970, has little in the way of teaching materials, and few students. The village also has a dispensary, established in 1971, and a clinic, established in 1978. The dispensary has had no staff and no medicine for years, and during the course of the research was converted into a makeshift police station. The clinic is staffed with one health officer, one nurse and some local health workers, but has no medicine. A private clinic, opened in 1996 in two rented rooms in the village, remained closed throughout 1997 owing to an insufficient number of patients. In 1997, the village was allocated a police officer following serious incidents of armed robbery within the village.

Public utilities are similarly weak. Water is obtained largely through local wells, which tend to dry up during the dry season, causing serious water shortage. A borehole was

constructed in 1983, but broke down in 1996, and was not repaired during the entire period of the research. There is no electricity, though the village has a telephone. The dirt road is maintained only by communal efforts, and is only laboriously navigable during the rainy season. Nonetheless, transport links between the village and surrounding regional and urban centres are fairly good, owing to the services of a commercial vehicle, which runs passenger services in and out of the village several times per day. There are only four other motor vehicles in the village, including the private car belonging to the village head.

### ***Research Methodology***

Fieldwork for this study was conducted between July 1996 and June 1997. The timing of the research was chosen to cover the three major seasons of non-farm activity in the area: the 'wet' season (*damina*), the 'dry' or 'harvest' season (*rani*) and the 'hot' (*bazara*) season,<sup>1</sup> and to permit economic monitoring of both agricultural and non-farm activities at the end of each of these seasons in September, January and May.

In an effort to reflect the interrelation of the agricultural and non-farm sectors, two types of samples were taken from the village: a household sample and a non-farm enterprise sample. The aim was to capture in sufficient detail both the role of non-farm activities in household livelihood strategies, and the enterprise-level dynamics of a wider range of non-farm activities, including several strategic enterprises carried out by migrants who were not members of local households.

The value of the data collected from the two samples rests heavily on appropriate definitions of the two key concepts used to define them: the concepts of household and non-farm activity. Both of these concepts have a long and contentious history in African social science literature. For the purposes of this study, definitions were chosen to reflect as closely as possible the dynamics of social organisation and economic change in rural Hausa society.

Households were defined as units of production rather than as units of co-habitation. This conforms to Hausa patterns of agricultural organisation, in which a household may be defined as a unit of production comprising male relatives who farm jointly, together with their wives, children and other dependants (Hill 1972). Owing to the individualising pressures of agricultural commercialisation, few households still farm in joint production units of related

---

<sup>1</sup> The local terminology, involving three distinct seasons, was taken as the basis of the seasonal divisions used in the study, despite its sometimes awkward interaction with English seasonal terminology used in the savanna. While the wet season posed no problems, being marked by the start and cessation of the rains, the conventional usage of the term 'dry season' tends to blur together two distinct seasons as distinguished by local terminology and occupational behaviour. The first half of the dry season (*rani*) is a largely cold season which last from the cessation of the rains in September to the end of the cold period in January. Although this is the season most strongly associated with non-agricultural activities, it is also heavily occupied with agricultural activities relating to the harvest, with the traditional staple, sorghum, along with key varieties of beans, being harvested in November and December. The second half of the dry season (*bazara*) is a hot and humid period which lasts from February until the rains begin in April/May. In this study, I have used the term 'dry season' (and occasionally 'harvest season', or 'harmattan') to refer only to the dry, dusty, cold season which covers the first half of the non-rainy period. The term 'hot season' has been used to refer to the second half of the non-rainy period.

adult males, traditionally known as *gandu*. Such units are now predominantly found among wealthy households, or among the Christian and pagan Hausa (known as the Maguzawa). Among low- and middle-income households, the male heads frequently farm alone and the household resembles a nuclear family.

Non-farm activities were defined to reflect any movement away from livelihoods based on agricultural production for the household. This includes agricultural wage labour, as well as non-agricultural activities and other forms of wage labour. Agricultural processing activities for sale outside the household, and trade in crops produced by others, were also included in the category of non-farm activities. The inclusion of agricultural wage labour and commercial processing activities in the category of non-farm activities informed the choice of the term 'non-farm' rather than 'non-agricultural'. While wage labour and commercial agricultural processing activities can be defined as agricultural activities, they lie outside the category of agricultural self-provisioning activities centred on the household farm, and are, as such 'non-farm'.

The household sample used in the study involved a systematic random sample of 100 farming households, selected from the village tax list. A structured questionnaire was administered to household heads only, focusing on general household characteristics, agricultural and non-agricultural activities within the household, levels of agricultural production, occupational aspirations and assessments of the prospects of agriculture and non-farm activities under current economic conditions.

In order to collect more detailed information on the activities, incomes and attitudes of other household members, a sub-sample of 40 households was randomly selected from the main sample. Questionnaires were administered to all economically active members of the household, including wives and male and female dependants. This involved a three-phased monitoring of each economically active member, carried out at the end of each of the three main agricultural seasons (rainy, harvest and dry), focusing on income in cash and kind from all economic activities, as well as income from gifts.

On the basis of an independent survey of all non-farm activities in the village, an additional sample of 50 non-farm enterprises was selected. Activities were divided into occupational categories, and a stratified purposive sample was selected to represent large and small-scale operators in each of the various categories. A questionnaire was administered to this group, focusing on enterprise characteristics, and the impact of current economic conditions on income levels, as well as on access to capital, inputs and labour. In the household as well as the enterprise samples, the questionnaire-based surveys were supplemented with in-depth oral interviews with a range of respondents within as well as outside the samples.

In order to consider the role of economic inequality in developments in the non-farm sector, data analysis was based on the stratification of the various samples. In the household sample and sub-sample, stratification was based on access to household and hired labour. In the relatively commercialised and broadly land-surplus conditions of the Nigerian savanna, studies have indicated that the classification of households in terms of net labour purchases or sales is a



more important indicator of socio-economic position than landholdings or income (Longhurst 1985; Mustapha 1990). Accordingly, households in the main sample and sub-sample were stratified according to a measurement of the household head's net sales or purchases of agricultural labour. Household heads who performed more agricultural labour than they used on the household farm were placed in the lower stratum, those who performed less than 10 per cent of the labour used on the household farm were placed in the upper stratum, and those in between were placed in the middle stratum. In the household sample, 51 per cent of the households belonged to the lower stratum, 42 per cent belonged to the middle stratum, and 7 per cent to the upper stratum.

The sample of non-farm enterprises was also stratified. The different economic logic and composition of this group, however, required a different basis of stratification from that used in the household samples. Unlike the household sample, the enterprise sample included migrants, some of whom did not farm, but were among the most successful entrepreneurs in the village. Given that the majority of the enterprises investigated were owner-operated, and that the nature of the activity appeared a more critical measure of income generating potential than access to labour *per se*, capital rather than labour was chosen as the basis for stratification in the enterprise sample. The sample was stratified into two groups based on the amount of capital necessary to start up a given enterprise in 1997 prices. Due in part to the purposive nature of the sample selection, 50 per cent of the sample was in the top category, and 50 per cent in the bottom category, although this even distribution was not expressly intended in the design of the sample.

Given the relatively small size of the various samples, analysis of variation within the samples necessarily involves very small numbers with limited statistical significance. The objective of the statistical analysis is therefore not so much to prove, as to illustrate patterns of behaviour and of socio-economic relationships.

The more quantitative orientation used in the analysis of the various samples was supplemented by a range of qualitative techniques, largely case studies and historical interviews. Approximately fifteen individual case studies were collected, across generational, occupational and gender categories. These case studies focused on changes in non-agricultural activities over time, sources of non-farm capital, and the relationship between agricultural and non-agricultural activities in the organisation of livelihood strategies. Five historical interviews were also conducted with old men and one old woman in the village who were deemed to be knowledgeable about changes in non-farm activity patterns at the village level. One of these village-level historical authorities was born around or before the turn of the century, and, sadly, died shortly before the conclusion of the fieldwork. The remaining three had clear memories that went back to the 1930s and 1940s, yielding useful insights into the impact of female seclusion and the penetration of modern non-farm activities into the village. The information gathered in these interviews was verified by cross-comparison among informants and reference to the abundant historical literature on rural northern Nigeria.

### ***Methodological Problems***

Owing to difficulties with the timing and design of the study, and the fundamental problems of quantification in a rural African environment, a number of problems arose in the process of data collection and analysis. The timing of the study confronted a problem of representativeness right from the very beginning, owing to the fact that it coincided with a severe fertiliser distribution crisis, which dramatically affected agricultural production, livelihood strategies and income levels in the area. However, the fertiliser-related pressures that arose between 1996 and 1997 represented an acute manifestation of a longer term problem of northern Nigerian agriculture, rather than any departure from prevailing trends. The result was to dramatise rather than distort the major trends in the development and relationship of agricultural and non-agricultural activities. In the interest of a balanced assessment, however, it was necessary to highlight any changes directly attributed to the 1996-7 fertiliser crisis.

A second difficulty arose in the context of conflicting aims between the sampling strategy and objectives of stratification. In the household sample, the definition of households as production units was deliberately chosen to represent the widest possible generational spread of household heads, from old compound heads to young men who had recently broken away from their father's production unit. The central aim was to represent the strategies and concerns of younger as well as older adult males, along with their households, so as to capture generational differences in skills, occupational identities and access to factors of agricultural production.

Unfortunately, an unintended effect of this procedure was to dampen evidence of socio-economic differentiation, which is obviously weaker where there is significant influence of life-cycle factors. Wealthy young heads just starting up independent households may have structural advantages which place them in the top socio-economic category, but are likely to score less well on such indicators as income, assets, or access to family labour than much older and better established heads in the middle category, who have larger households and have had a much longer period within which to accumulate assets. Clearly, stratified averages of indicators of economic wealth do not distinguish between the capacity to accumulate, controlling for age, and the actual stage of accumulation a particular head has reached in terms of the head's, and the household's, life cycle.

A further problem arose in the context of the household sub-sample which involved 40 households selected randomly from the main household sample. While Norman argues that a sample of 40 is sufficiently representative in the context of rural northern Nigeria, it was found that this is not necessarily the case if the sample is further stratified. In the household sub-sample, the upper stratum captured only two members (compared to 7 members in the main household sample), both of whom turned out to be particularly unrepresentative of their stratum. The first was a young man of 25, who was extremely well-off for his stage in life, but rated significantly lower on many indicators than older and better-established household heads in the middle stratum. The second was a very old man in his 70s, who hired most of the labour used on his farm largely because age and infirmity rather than wealth. Owing to these

difficulties, the household sub-sample was stratified into two, rather than three socio-economic groups. The upper and middle strata of the main household sample were amalgamated into a single upper stratum in the sub-sample, while the lower stratum was defined in the same way in both samples.

In the process of data collection, difficulties were confronted in the quantification of a number of critical variables. These included age, levels of agricultural production and income, and profits from non-farm activities. Many of the respondents were either unable or unwilling to estimate their ages. Attempts to approximate ages accurately by locating the time of birth with relation to important local events proved more successful, but was so time consuming that it began to interfere with the successful completion of the questionnaires, and had to be abandoned. The ages, especially of some of the older respondents, therefore represent approximations in many cases.

In the case of agricultural production levels, problems arose, not in the area of quantification *per se*, but in the area of comparability and aggregation. Agricultural producers in this area can recall with a high degree of accuracy the quantities harvested and sold in the current, and also in the previous, agricultural year. However, answers are most accurate if given in local units, which frequently vary from crop to crop, and do not necessarily distinguish between shelled and unshelled produce, making conversion to standard measures a complex procedure.

Further problems arose in the valuation of these crops for the purposes of calculating agricultural and non-farm income shares. Here, the valuation of unmarketed crops posed problems owing to the fact that prices for a given crop vary considerably according to time and location of sale, quality and variety of the crop, and the economic pressure facing the seller. For the purposes of this study, it was decided to value unmarketed crops according to the average price of the equivalent marketed crops within the household sample. The alternative of using local average annual prices was unsuitable, because producers from Nasarawan Doya market their crops in a wide range of village, bulking and urban markets, all of which have very different annual price ranges. Unmarketed sugar cane posed a particular problem owing to its use as a raw material for household sugar production enterprises. For this reason, no value was calculated for unmarketed sugar cane under the category of agricultural income, since it invariably reappeared in the form of income from local sugar production under the category of non-farm income.

Attempts to estimate weekly profits from non-farm activities were even more problematic. It became clear that operators define profits as what is left by the end of the week, although in many cases, a significant amount of what is earned is spent during the course of the week on various household needs. In order to circumvent this problem, it was necessary to focus data collection on turnover, which respondents were able to recall more accurately. Thus, calculations of total incomes are based on gross incomes, inclusive of production costs, in both agriculture and non-farm activities. Calculations of income shares for agricultural and non-farm

incomes should therefore be treated as rough orders of magnitude, which were deemed adequate for the purposes of comparison and identification of trends, but do not represent actual disposable income.

### **Agricultural Influences, Non-Farm Participation and Rural Differentiation**

Despite the significant role of non-farm activities in rural northern Nigeria, agricultural success remains a critical factor in the terms of access to non-farm activities. Changes in the agricultural sector either create pressures which force rural dwellers into non-farm activities on disadvantageous terms, or they can provide inputs and capital for enhanced accumulation through non-farm sources. In Nasarawan Doya, the critical factors influencing the nature of non-farm participation are access to land, labour and capital for the purchase of inputs. In addition to these economic variables, gender and cultural/religious factors also play a central role in determining the level of agricultural participation, and the nature of access to non-farm activities, owing principally to the constraints imposed by female seclusion.

Since the 1970s, the nature of access to land and capital/inputs has changed dramatically in Nasarawan Doya. In the context of expanding opportunities in grain agriculture during the 1970s and late 1980s, and significant alienation of land for commercial and institutional uses, the land surplus character of local agriculture can no longer be taken for granted. Furthermore, dramatic shifts in crop and input prices under structural adjustment have significantly altered both cropping choices and the ability to sustain existing levels of agricultural production. All of these factors have had a significant effect on local perceptions of agricultural prospects, as well as on short-term and long-term livelihood strategies.

### ***Household Characteristics***

General information about the socio-economic characteristics of households resident in Nasarawan Doya was gathered from the main sample of 100 households. In most respects, the village is typical of the central savanna as a whole. Owing to the influence of Islamic norms of social organisation, all of the households are male-headed. While in exceptional circumstances, female-headed households do occur, they numbered under 1 per cent of the village households at the time of study, and tend to be associated either with professional prostitution or widows/divorcees who are sufficiently wealthy to resist social and economic pressures to remarry or return to their natal household.

The ethnic composition of the household heads was 94 per cent Hausa, and 6 per cent Fulani. The ethnic category of Fulani includes both settled Hausanised farming households, and nomadic and semi-nomadic pastoralists resident in the outlying hamlets of the village. Only one out of the 100 households was Christian, again, resident in the outlying hamlets, while the other 99 per cent were Muslim. 93 per cent of the household heads were indigens of Nasarawan Doya, and the remaining 7 per cent came from villages in the vicinity, or from neighbouring states (Kano and Katsina) with ethnically and culturally similar populations. There is a clear

socio-economic bias to these variations. Over two-thirds of the households with Fulani and non-indigenous origins, and the one Christian, are in the lower stratum of households, while the upper stratum contains only Hausa Muslim indigens.

The average age of household heads was 40.7 years, ranging from 48.1 years in the upper stratum, through 43.7 in the middle stratum, to 37.1 years in the lower stratum. This suggests that life-cycle factors may play a role in the determination of economic inequalities, although it should be noted that both the upper and lower strata contained a mixture of old and young members. The average household size is 8.6 members. Again there is a clear variation according to socio-economic strata, ranging from 13.6 members in the upper stratum, to 6.4 members in the lower stratum. Owing to the influence of Islamic norms, which allow up to four wives, the average number of wives per household is 1.7, ranging from 1.9 in the upper stratum, to 2.0 in the middle stratum, and falling to 1.4 in the lower stratum. Some households also had migrant members who were not resident in the household for part or all of the year. Numbers are fairly low, as out-migration is not significant in this area. On average, only seven out of 100 households had migrant members at the time of interview. Once again, however, the average number of migrants per household was highest in the upper stratum, at 0.4 migrants per household, significantly lower in the middle stratum at 0.07 migrants per household, and lowest in the lower stratum, at only 0.02 migrants per household.

**Table 1: General Household Characteristics**

Stratum	Age of household head	Size	No. of wives	No. of migrants
Upper	48.1	13.5	1.9	0.41
Middle	43.7	10.4	2.0	0.07
Lower	37.1	6.4	1.4	0.02
Sample average	40.7	8.6	1.7	0.07

Source: Fieldwork

Despite the presence of a primary school in the village, levels of Western education are low. The explanation derives from the historical friction between Islamic social and political institutions and the Western (Christian) education system, a friction reinforced by the colonial system of indirect rule. Villagers tend to adhere to the pre-existing Koranic education system, which does little to improve access to jobs in the modern sector. Among household heads, 3 per cent had no education, 88 per cent had Koranic education, and 7 per cent had some or all primary education. Only 2 per cent had any exposure to secondary education. While primary education was positively associated with socio-economic status, the two household heads with some secondary education were both young men in the lowest socio-economic stratum.

Evidence from the household sub-sample suggests that generational and gender factors are important determinants of access to Western education, which is most strongly associated with young males. All of the wives and female dependants had Koranic or no education. By contrast, 34 per cent of the economically active male dependants (all of whom were under 25) had primary education.

The incidence of technical skills outside of agriculture was also fairly low. Among household heads in the main sample, 5 per cent had some mechanical skills (mostly bicycle repair), 4 per cent had some training in tailoring, and 2 per cent had training in local building crafts. Tailoring skills were biased toward the top stratum, mechanical skills were concentrated in the middle stratum, and traditional skills were entirely in the lower stratum.

The sample households engaged in a range of agricultural and non-agricultural activities. 99 per cent of the households engaged in wet season farming. The only non-farmer was a head whose land was frozen in a land dispute, which had prevented him from cultivating it, though under normal circumstances he too would have farmed. In addition, 78 per cent engaged in dry season farming, and 85 per cent kept some form of livestock. Both dry season farming and livestock keeping were slightly biased in favour of the top stratum of households, 85 per cent of whom engaged in dry season farming and 100 per cent of whom kept livestock.

Farming activities in the area are relatively commercialised, and the use of commercial inputs and hired labour is widespread. 98 per cent of the households used chemical fertiliser, and 68 per cent used at least some hired labour. Just under 30 per cent of households used ox ploughs, which were hired in one third of the cases, while the remaining two-thirds owned their own plough.

**Table 2: Participation in Non-Farm Activities**

Stratum	Participation of HH heads in NFAs (%)	Mean no. of non-farm activities per head	Mean no. of non-farm activities per househ'd
Upper	100.0	1.8	5.0
Middle	92.8	1.2	4.0
Lower	82.3	1.3	2.9
Sample average	88.0	1.3	3.5

Source: Fieldwork

In addition to their agricultural pursuits, 88 per cent of household heads admitted to some form of non-farm activity, leaving only 12 per cent with no non-farm activities (Table 4.2). Household heads with no non-farm activities were heavily concentrated in the two lower socio-economic strata. 9 per cent of them belonged to the lowest stratum, while the remaining 3 per cent belonged to the middle stratum. The work of Norman *et al.* (1982) in nearby villages

during the early 1970s found that 25 per cent of household heads had no non-farm activities, suggesting an increase in the rate of non-farm participation over the past 25 years.

In many cases, household heads pursued more than one non-farm activity, and additional non-farm activities were pursued by other family members, especially wives, whose activities were almost totally confined to the non-farm sector. The number of activities per household head, and per household, were positively correlated with socio-economic status. Households in the upper stratum had an average of 5.0 non-farm activities, while those in the middle and lower stratum averaged 4.0 and 2.9 activities respectively. Clearly the greater number of wives and larger households in middle and upper-stratum households contributes to the greater number of non-farm activities in the top two strata, but the underlying capacity to acquire more wives, and to start-up more non-farm activities suggests the importance of economic factors.

Control of agricultural and non-agricultural assets tends to support this assessment. Although the upper stratum accounted for only 7 per cent of the sample, its members owned 27 per cent of the livestock, 40 per cent of the ploughs and threshing machines, 44 per cent of the residential plots, 26 per cent of the motorised transport (though only 10 per cent of the bicycles). The bias in equipment for lucrative non-farm activities was equally great. The upper stratum owned 50 per cent of the grinding machines, 19 per cent of the sugar cane crushing machines, 38 per cent of the sewing machines, and 25 per cent of the macaroni machines. By contrast, the lower stratum, which comprised 51 per cent of the sample, owned 27 per cent of the livestock, 10 per cent of the ploughs and threshing machines, 12 per cent of the residential plots, 30 per cent of the motorised transport, and 34 per cent of the bicycles. The lower stratum performed even worse in terms of access to equipment for lucrative non-farm activities. They owned none of the grinding machines, 21 per cent of the sugar cane crushing machines, 12 per cent of the sewing machines, and 25 per cent of the macaroni machines.

While this static picture of the distribution of assets suggests a significant degree of inequality, it does not indicate whether this represents a process of differentiation or a more cyclical pattern of inter-household inequalities. In order to gain a more longitudinal picture of patterns of asset distribution, household heads were asked to indicate whether they had more or fewer of certain key assets than their fathers had at the same age, or the same stage in life. Given the difficulties with respondents' assessments of their own age, this can only be taken as a very general indicator of tendencies toward economic differentiation, but it does give some idea of general trends.

The question of heads' asset ownership relative to that of their fathers was posed with regard to land, livestock and other assets, which included houses, agricultural equipment, machinery and vehicles. In order to minimise the extent to which the answer to one question would bias the answer to the other, the questions were posed at widely different points in the interview, in each case, following an extensive discussion concerning the respondent's own control of the asset in question.

The responses, represented in Table 4.3, show a strong tendency toward inter-generational

accumulation in the upper stratum, and a more moderate trend toward accumulation in the middle stratum. By contrast, the lower stratum shows a stronger tendency toward stagnation and declining control of resources, especially in the case of land. While 71 per cent of the upper stratum claimed to own more land than their fathers at the same stage in life, with only 29 per cent claiming to own less, barely 33 per cent of the lower stratum claimed to own more land than their fathers, and 39 per cent claimed to own less. Data for the middle stratum fell between these two diverging trends, with 57 per cent claiming to own more land than their fathers, but only 19 per cent claiming to own less.

**Table 3: Household Heads' Perceptions of Inter-generational Accumulation of Key Economic Assets (% of Household Heads)**

Stratum	Land relative to father		Livestock relative to father		Other assets relative to father	
	More	Less	More	Less	More	Less
Upper	71.4	28.6	57.1	28.6	85.7	0.0
Middle	57.1	19.0	52.4	19.0	54.8	9.5
Lower	33.3	39.2	33.3	27.5	47.1	11.8
Sample average	46.0	30.0	43.0	24.0	53.0	10.0

Source: Fieldwork

The trend toward differentiation in livestock ownership appears somewhat more moderate. Only 57 per cent of the upper stratum claimed to own more livestock than their fathers, against 33 per cent in the lower stratum, and the percentages who claimed to own less livestock are on average lower than in the case of land, especially with regard to the lower stratum. In the case of other assets, there is a pronounced trend toward accumulation in all strata, with nearly 50 per cent or more of each stratum owning more than their fathers, and barely 10 per cent or less in any given stratum owning less. However, this is less an indicator of improvements in socio-economic position than of the rapid technological, social and economic change experienced in the last thirty to forty years. The commercialisation of crop production, and penetration of consumer durables into rural northern Nigeria have both expanded dramatically since the 1960s, making assets such as bicycles and radios, which were extremely uncommon among the previous generation of household heads commonplace in the current generation.

Overall, the data indicate a positive association between household size, access to household and hired labour for farming activities, participation in non-farm activities, and ownership of a range of agricultural as well as non-agricultural assets. Conversely, at the level of household heads, these factors show little relationship with levels of Western education. This suggests that, in the context of Nasarawan Doya, non-farm activities play a more central



role in accumulation than in poverty alleviation, and have less to do with educational opportunity than appears to be the case in some other parts of Africa. This assessment which will now be explored within the wider context of economic and policy change in rural Nigeria.

### *Access to Land*

Over the past two decades, Nasarawan Doya has experienced the closing of the land frontier, although land shortage has not, as yet, become a significant constraint on agricultural production. Within the household sub-sample, in which detailed investigation and measurement of land-holdings for all household members was undertaken<sup>2</sup>, average household landholdings were 3.45 hectares, which is adequate to support a household in this region. Variations in average land holdings between upper and lower-stratum households were fairly minor, at 3.79 ha. and 3.08 ha. respectively (Table 4.4). The variation between the smallest and largest holdings in the sample were much wider. The smallest holding was 0.17 ha., while the largest was 19.99 ha.. The variation in farm sizes within the village as a whole are even more dramatic, with farms as large as 500 ha.. However, except in the case of these extremely large holdings, land holdings are only weakly associated with socio-economic status. The largest holding in the sample belonged to a relatively poor household in the bottom stratum. This was the one Christian household in the sample, which adheres to the pre-Islamic Hausa farming system involving very large extended family agricultural units. Some lower-stratum Islamic households also had holdings in excess of 4 ha., especially those resident in the outlying hamlets.

In addition to traditional forms of access to land, which include inheritance (*gado*), gift (*kyauta*), borrowing (*aro*) and mortgaging (*jingina*), there has been a significant development of land markets, such that those who wish to acquire additional land have the opportunity to buy or rent it from others. However, the cost of purchasing land has risen dramatically since the 1970s. In Nasarawan Doya, one hectare currently costs about N10,000 (US\$ 112.00), which dramatically exceeds the disposable income of most households. Land rental is more affordable, at approximately N200 per hectare per season, though the owner will also demand a token portion of the produce. However, as land becomes more scarce and costly to buy, land owners have become more reluctant to rent out land, except to relatives, for fear that the tenant may try to lay permanent claim to the land. Since 1995, there has been an increase in the availability of land for rent owing to the high cost and scarcity of fertiliser, though the generalised availability of this increased supply of rentable land remains constrained by the concern to avoid the risk of subsequent ownership claims on the part of tenants. The result has

---

<sup>2</sup> Collection of data on landholdings followed the method used by Matlon (1977), which involved detailed discussions with each landholding household member (including women) concerning the proportionate relationship of each holding to the member's largest farm, followed by the actual measurement of the largest farm of each household member. This method was found by Matlon to be a reasonably accurate indication of actual holding size. In cases in which women's land was not in the village, proxies were calculated on the basis of estimates of farm sizes relative to the size of the household courtyard, which was then measured.

been to moderate any increases in the cost of renting land, while continuing to limit access.

**Table 4: Size of Land Holdings (Hectares)**

Stratum	Average land size (household)	Average land size (heads of HH)	Average land size (male depend'ts)	Average land size (women)
Upper	3.79	3.32	0.55	0.04
Lower	3.08	2.54	1.02	0.09
Sample average	3.45	2.95	0.72	0.05

Source: Fieldwork

In the household sub-sample, 48 per cent of total land holdings were inherited, 28 per cent was purchased, 16 per cent was rented or borrowed, and the remaining 8 per cent was made up of land acquired through gifts and clearing (Table 4.5). Owing to the high cost of land, the percentage of purchased land was higher in the upper stratum, which had acquired 37 per cent of average household land through purchase as against 19 per cent in the lower stratum. Conversely, rental and borrowing were greater in the lower stratum, at 21 per cent of average household land holdings, compared to 12 per cent in the upper stratum. Dependence on rented and borrowed land was particularly pronounced among young male dependants.

**Table 5: Importance of Various Forms of Land Tenure**

Stratum	% of land inherited	% of land purchased	% of land borrowed/ rented	% of land other
Upper	43	37	12	8
Lower	53	19	21	7
Sample average	48	28	16	8

Source: Fieldwork

Acquisition of land through communal allocation from the Village Head is no longer an option in Nasarawan Doya. There is no unowned land remaining in the village. The only land available for allocation is that belonging to the forest reserve which occupies part of the traditional land area of the village. However, land from the forest reserve can only be allocated by the State government, and therefore requires significant political connections.

In the face of growing land pressure and the widespread use of chemical fertilisers, the practice of fallowing land has declined significantly. It is currently estimated that no more than 10 per cent of village land is left uncultivated, and the major reason is lack of fertiliser rather than a deliberate decision to fallow. In the household sub-sample, only 5 per cent of total land was left uncultivated in the 1996/7 agricultural year, and more than half of those with

uncultivated land cited the lack of fertiliser as the reason for the failure to cultivate.

**Table 6: Women's Land Holdings and Forms of Tenure**

Stratum	Average land size (Ha)	% who own land	% of land inherited	% of land purchased	% of land other
Upper	0.04	20	87	0	13
Lower	0.09	19	33	50	17
Sample average	0.05	19	72	15	13

Source: Fieldwork

Contrary to the general perception concerning women's access to land, Muslim Hausa women can and do own land, despite the fact that the majority of them do not farm. Under Islam, women have the right to inherit land, though they are entitled to only one half the share enjoyed by their male relatives. However, gender differences in land holdings in Nasarawan Doya were extremely wide. Men controlled 97 per cent of the land in the sample, while women had only 3 per cent. Only 19 per cent of the women in the sample owned land, and 72 per cent of it was inherited (Table 4.6).<sup>3</sup> Women's land holdings ranged from 1.30 ha. to just 0.06 ha., with an average of 0.28 ha. among landholding women. In most cases, women's land was left in the care of male relatives, who farmed it and sometimes gave a share of the produce to the owner. This was not entirely an expression of male domination. In fact, previous studies, as well as interviews with informants in Nasarawan Doya, indicate that, since the value of land began to increase in the 1970s, women in this area now go to greater lengths to obtain their share of inherited land, even to the point of going to court (Meagher 1991; Ross 1987). However, having obtained recognition of their share, most women leave the land with their male relatives, in order to maintain a stronger claim on the resources of their male kin in times of trouble.

Only two of the 70 women in the sample actually farmed, and both of them belonged to the lower stratum of households, which accounts for the larger average land holdings among lower-stratum women. One of the two farming women belonged to the Christian household in the sample, and was not subject to Islamic constraints on agricultural participation. In fact, among the Christian and pagan Hausa, agriculture is one of the main economic activities of women, who have central responsibilities in household staple food provisioning. This woman owned 0.55 ha. of land, all of which she had purchased. The second woman was a particularly enterprising Muslim woman who hired labour to farm for her. She had acquired land on loan from her father, and later bought it from him, though the land amounted to only 0.07 ha..

<sup>3</sup> It should be noted that, in view of the very early age of marriage in Hausa Muslim society, a significant percentage of the women were not yet eligible to inherit land because their parents were still alive.

### ***Inputs, Crop Prices and Cropping Choices***

While land has not, as yet, become a major constraint on agricultural production, access to sufficient capital and inputs to cultivate available land has become increasingly problematic. The predominance of a capital rather than a land constraint has long been recognised as a feature of Hausa agriculture (Hill 1972). However, the intensity of the capital constraint has become particularly pronounced in the context of Nigeria's Structural Adjustment Programme in 1986. Currency devaluation and the liberalisation of crop prices, in conjunction with the imposition of bans on the importation of rice (1985), maize (1985), wheat (1986) and barley (1988), have brought about spectacular increases in the prices of local crops. In the decade between 1985 and 1995, the prices of maize and sorghum (an important industrial substitute for barley), which have been the two most important cash crops in Nasarawan Doya over the period, increased by over 1,500 per cent and 1,200 per cent, respectively. At the same time, the progressive removal of subsidies on agricultural inputs, in conjunction with currency devaluation, led to even more rapid increases in the prices of fertiliser and pesticides, the two main agricultural inputs in savanna agriculture (Meagher 1995).

From 1995, increases in fertiliser prices have further intensified as a result of a ban imposed in 1995 on the importation of fertiliser (with a view to stimulating local fertiliser production), and a strictly enforced ban imposed in 1996 on the distribution of fertiliser through the open market, which led to a crisis in access to fertiliser during the critical phase of the 1996/7 cropping season. In the face of these measures, fertiliser prices have skyrocketed. At the same time, increases in grain prices have been dampened by the removal of bans and reduction of tariffs on imported wheat (1992) and rice (1995, 1997), and the progressive relaxing of the ban on maize imports. The result has been the progressive erosion of the profitability of several of the main cash crops of the Nigerian savanna, compounded by a dizzying instability and unpredictability in crop price movements.

Table 4.7 compares indices of local grain prices with the price of fertiliser (the main input in savanna grain production), and the rural cost of living in Nigeria. Fertiliser price indices refer to the open market price, which is the distribution channel through which the vast majority of northern Nigerian farmers procure their fertiliser. The grain price indices for maize and sorghum refer to wholesale prices in Makarfi market, the rural bulking market in which most farmers in Nasarawan Doya market their crops. Clearly, since 1992 (the year of the unbanning of wheat imports) grain price increases have been significantly outstripped by increases in both fertiliser prices and the rural cost of living, leading to a significant decline in real agricultural incomes. Price relationships between cowpeas/groundnuts and pesticides have suffered from the same problem (Meagher 1995; KTARDA 1989; KTARDA 1993)

**Table 7: Price Indices for Fertiliser, Grains and the Rural Cost of Living (1991-95) (1985 = 100)**

Year	Fertiliser (market price)	Maize	Sorghum	Rural CPI
1991	389	348	337	328
1992	767	563	524	471
1993	1389	654	517	737
1994	1333	578	512	1154
1995	4444	1621	1340	2022

Sources: APMEU unpublished grain price data; Central Bank of Nigeria *Annual Report and Statement of Accounts* 1988-92; Egg & Igue 1993; KTARDA Quarterly and Annual Reports 1990-92; Meagher 1991.

Among poor farming households, the dramatic increase in grain prices poses serious difficulties independent of movements in input costs. Even in the savanna grain belt, a significant proportion of farming households are unable to meet their annual subsistence food needs. In Nasarawan Doya, 18 per cent of household heads had to buy staple food for their household in 1996/7. For these households, and for others who hover on the edge of food self-sufficiency in a climate of uncertain rainfall, high grain prices constitute a serious threat to sustainable livelihoods.

This range of economic pressures on agriculture have significantly affected both the types of crops grown and the absolute level of crop production. As recently as the early 1990s, hybrid maize was one of the most important cash crops in the region around Nasarawan Doya, particularly among the top stratum of farmers, significantly outstripping marketed production of sorghum. However, maize is particularly dependent on chemical fertiliser. The rising cost and declining access to fertiliser has forced farmer in all socio-economic categories to cut back on maize production. In fact, during the fertiliser crisis of 1996, some farmers in Nasarawan Doya who had planted in anticipation of fertiliser, uprooted the germinating maize from their fields and replaced it with other crops. The same practice was observed in a number of other farming communities in the maize producing region.

While the shift away from maize production has been particularly marked since the surge in fertiliser prices in 1995, a trend away from maize production, particularly among small-scale farmers, has been observed since the early 1990s (Meagher & Ogunwale 1994; KTARDA 1993). This has prompted not so much a shift out of agriculture, as a shift in favour of alternative cash crops which are less input dependent. Principal among these in Nasarawan Doya are sorghum, which is also the region's major staple, sugar cane, peppers and rice (Table 4.8). Even among these crops, fertiliser is important for good yields, but, unlike maize, some gain over the initial investment can be obtained even with little or no fertiliser.

**Table 8: Percentage Share of Major Cash crops in Total Crop Income (1996/7 Cropping Season)**

Stratum	Sorghum	Sugar cane	Maize	Peppers	Rice	Ground-nuts	Cowpeas	Other
Upper	26	20	14	14	14	4	3	5
Lower	23	22	13	12	15	6	4	5
Sample average	25	20	14	14	14	5	3	5

Source: Fieldwork

In 1996/7, the two most important cash crops in Nasarawan Doya were sorghum and sugar cane, which accounted for 26 per cent and 20 per cent, respectively of total income from marketed crops. While sorghum maintained pride of place as the major cash and food crop, the prominence of sugar cane as a cash crop represents, at least in part, a response to commercial opportunities created by structural adjustment. While sugar cane has always been a significant cash crop in the area, particularly among wealthy farmers, it has benefited from rising prices under structural adjustment owing to increased demand for locally produced sugar as a substitute for imported granulated sugar. The resulting shift toward sugar cane production has also involved a shift in the variety of sugar cane produced. Over the past decade, the variety introduced (often under duress) during the colonial period for industrial sugar production has been abandoned in favour of a more traditional local variety suited for artisanal sugar production.

In the context of wide access to river bottom land (*fadama*) required for sugar cane production, both upper and lower-stratum households in Nasarawan Doya have gone into sugar cane production. Average *fadama* holdings represent 0.72 ha. in upper-stratum households, and 0.50 ha. in lower-stratum households, which in both cases comprises 17 per cent of total land holdings. It was found that 68 per cent of the households grew sugar cane in the 1996 cropping year, 71 per cent in the upper stratum, and 63 per cent in the lower stratum. This reflects a bias toward upper-stratum households in the ability to exploit new opportunities in sugar cane production, owing to greater access to *fadama* land, and a greater ability to afford at least some fertiliser. However, a much stronger bias in favour of upper-stratum households is reflected in the levels of commercialisation of sugar cane. While lower-stratum households marketed 93 per cent of their sugar cane, upper-stratum households marketed only 66 per cent, and processed most of the remainder in household-based sugar production enterprises. The ability to engage in local sugar production, which has a comparatively high capital threshold, considerably improves the profitability of sugar cane production.

The profitability of pepper production has also enjoyed sporadic improvements under

structural adjustment. A surge in pepper prices during the early 1990s brought windfall profits to many local farmers. In the case of one farmer interviewed, profits from pepper production were invested in the purchase of a horse and sugar cane crushing machine for the production of local sugar.

Despite the creation of a few cash cropping opportunities, the realignment of input and crop prices under structural adjustment has led to an overall decline in agricultural production. While the early years of structural adjustment were reckoned by many farmers to have increased the profitability of farming, most of the farmers interviewed indicated that they had been forced to cut back on their level of agricultural production over the past two years owing to the high cost and unavailability of fertiliser. Studies conducted in other villages in the area suggest that, particularly among small-scale farmers, levels of agricultural production have been under pressure since the early 1990s, particularly among the lower stratum of farmers (Meagher & Ogunwale 1994).

High fertiliser prices also appeared to have depressed the levels of crop marketing. In both the 1995 and the 1996 agricultural years, sample households marketed an average of only 50 per cent of total crop production, in both upper and lower-stratum households. Studies of another village in the area in the early 1990s indicate levels of commercialisation on the order of 60 per cent (Meagher 1992). In upper-stratum households, the lower levels of commercialisation reflect in part the shift to the production of sugar cane for processing into local sugar rather than for direct marketing. However, high fertiliser costs also appear to have encouraged some farming households to hold back some of their surplus grain production in the hope of more remunerative grain prices. Despite cutbacks in levels of crop production and marketing, upper-stratum households in Nasarawan Doya appear to have maintained an overall advantage in commercial crop production. Although they account for only 52 per cent of the households in the sample, upper-stratum households accounted for 68 per cent of the value of marketed crops.

### *Perceptions of Agricultural Constraints and Prospects*

Interviews with older members of the community suggested that the overall performance and prospects of farming since Independence were mixed. On the one hand, the introduction during the 1970s of improved inputs and new crops, principally maize and cowpeas, and the extensive development of local as well as regional agricultural markets, appears to have made agriculture more profitable. On the other hand, a number of older men argued that agriculture, though more profitable, was less productive than before the introduction of fertilisers. It was felt that the soil yielded more in the late colonial period, and that, even with the help of chemical fertiliser, the land had become less productive than it used to be. The declining productivity of the land was attributed to various causes, including less reliable rainfall, the decline in fallowing, and the introduction of chemical fertilisers, which were felt by some to have 'weakened' the soil.

Older members of the community also felt that agriculture had suffered from a breakdown

in the traditional household organisation of labour. Since the early 1970s, sons have left the household production unit (*gandu*) earlier, weakening household control over agricultural labour, particularly among low-income households who are unable to hire labour from outside the household. This trend is corroborated by evidence from earlier studies of the breakdown of *gandu* labour units in rural Hausaland (Wallace 1978). The tendency of young men to withdraw earlier from *gandu* was attributed by older men to the disrespectful nature and laziness of modern youth, who were unwilling to engage in hard work. It was felt that young men now left the household farm to engage in non-farm activities, not because of a lack of land or capital, but because non-farm activities were less arduous than farming.

Information gathered from the members of the household sub-sample revealed the emergence of a more recent range of constraints, which centred around lack of access to fertiliser and the closing of the land frontier. However, perceptions of agricultural constraints varied importantly according to gender, generation and socio-economic status.

In the sub-sample, household members were asked to indicate whether access to land, labour or capital constituted important constraints on the expansion of their farming activities. Over 80 per cent of household heads ranked access to capital as the most important constraint on agricultural production, owing to a combination of rising production and household maintenance costs. 70 per cent of women, including the two who farmed, also identified access to capital as their most serious constraint, although the vast majority indicated that even with greater access to capital, they would not engage in farming because it was 'not their tradition'. By contrast, only 48 per cent of male dependants felt that capital was the major constraint on their farming activities. By contrast, 52 per cent of male dependants claimed that land, rather than capital, was their most serious agricultural constraint. It is worth noting that three-quarters of the male dependants who identified land as the most critical constraint belonged to the lower stratum of households, while the primary concern with capital was biased toward upper-stratum youths.

The two major solutions for coping with the capital constraint were to cut back on household expenditure and to cut back on agricultural production. In the case of the land constraint, the solutions proffered involved, for household heads, managing the little land one had or renting land, while for male dependants the overwhelming solution involved finding ways to earn money to buy land. Interestingly, non-farm activities, especially agricultural wage labour, were listed by young men as one of the major sources of income for buying land, which suggests an alternative interpretation of the tendency of young men to leave the household production units in pursuit of a range of non-farm activities.

The perceptions of household members concerning the major constraints faced in agriculture are surprising in three respects. First of all, out of the 133 household members interviewed, only one respondent, a household head, identified access to labour as a constraint on agriculture, which challenges the conventional notion of African agriculture as primarily labour constrained. In Nasarawan Doya, the supply of agricultural labour has been swelled



over the past decade by increasingly harsh economic and environmental conditions in the drier agricultural areas to the north, as well as by the increasingly active participation of local youth and low-income household heads in agricultural wage labour in order to meet up with the rising cost of inputs and food. This appears to have dampened real increases in the cost of labour relative to increases in land and input costs.

A second surprise is that land was perceived to be such a serious constraint among the youth. Over half of the male dependants, but only 7 per cent of household heads, identified access to land as their most serious problem. This supports earlier evidence of the recent emergence of a land constraint in Nasarawan Doya, once again contradicting the conventional land surplus image of African, as well as northern Nigerian, agriculture.

A third surprise is that none of the women, not even those who farmed, identified access to land as an important constraint on their agricultural activities. Although women's access to land is quite limited, it was not perceived by women themselves to be a significant constraint on their more active participation in agriculture. Traditional norms, and lack of capital, were identified as the major limiting factors, and there was little indication of a desire to alter these norms or to deploy any increase in access to capital in agricultural activities.

Despite the perception of serious constraints on agricultural production, and solutions that depended heavily on reducing expenditure or reducing levels of agricultural production, perceptions of the future prospects of agriculture in the area were remarkably sanguine. 89 per cent of household heads felt that agriculture remained promising, though 66 per cent indicated that the promise of agriculture was conditional on access to fertiliser. 11 per cent felt that farming had actually become more productive or profitable. Only 9 per cent of household heads felt that agriculture was not promising. It is worth noting that the average age of the agricultural pessimists was 38 years, and two thirds of them were under 40. This suggests that, among men, access to land plays an important role in perceptions about the future of agriculture as a source of livelihood.

Evidence of the range of serious economic pressures arising within agriculture -- on access to land and inputs, on the profitability of grain production, and on household provisioning -- is indicative of some of the major forces encouraging a recourse to non-farm sources of income. It should be noted, however, that some of the wealthier households continue to profit from agriculture, and that, according to the evidence on non-farm incomes per household, these are also the households who tend to have the greatest propensity to diversify into non-farm activities.

This suggests that the pressures generated by developments in the agricultural economy may be of two types: push factors associated with declining fortunes in agriculture, and pull factors associated with maximising opportunities for accumulation by taking advantage of non-farm investment outlets. Having undertaken an analysis of the push factors, it is necessary to complete the picture by turning to an analysis of the pull factors. This involves a consideration of how the climate of structural adjustment has affected the economic prospects of the non-farm

sector, with a view to exploring the extent to which the non-farm alternative represents survival strategies or is actually providing attractive livelihood and investment options in the face of agricultural instability.

### **Non-Farm Activities and Structural Adjustment: An Enterprise Perspective**

The development of the non-farm sector in Nasarawan Doya has been characterised by a comparatively high degree of mobility and adaptation to social, political and economic change. Over the long term, it is a history which reflects the decline of many traditional non-farm activities and the rise of new opportunities. Under the impact of structural adjustment, the structure of economic pressures and opportunities has changed yet again, undermining the profitability of some non-farm activities as well as creating some new non-farm opportunities. Beginning with a history of non-farm activities in Nasarawan Doya, this section will explore the effect of structural adjustment on the operation of a sample of 50 local non-farm enterprises.

#### ***The History of Non-Farm Activities in Nasarawan Doya***

By the beginning of the colonial period, a fairly wide range of non-farm activities were already practised in Nasarawan Doya. These ranged from local crafts for the production of household goods (pottery, calabash repairs and mat making) and textiles (weaving, tailoring and embroidery), to the activities of semi-occupational castes, including blacksmiths, butchers and traditional barbers. Trade was also an important activity, both regional grain trade to Zaria, and long distance trade in donkey caravans to places as far as Maiduguri and Lagos, for the purchase of kola, earrings, potash, rope and needles. However, participation in long-distance trade was quite limited, with only a few traders per year travelling out from Nasarawan Doya. Right up through the early colonial period, there was little in the way of wage labour. Villagers had no money to hire labour, and traditional as well as colonial officials tended to rely more on corvee and forced labour.

Although a range of non-farm activities existed, they played a relatively limited role in the village economy during this early period. The need for money was confined largely to official obligations, such as tax payments and donations for village activities. Non-farm activities were confined essentially to the dry season. During the wet season, villagers spent much more time on the farm, often returning late in the evening, rather than in the afternoon as they do now. (One might wonder to what extent the earlier return from the farm could be attributed to the advent of bicycles and motorcycles, rather than to reduced concentration on agriculture.)

The major changes in the non-farm sector during the colonial period revolved around the destruction of local crafts, the introduction of female seclusion, and the penetration of new activities. In Nasarawan Doya, crafts such as mat making, pottery, spinning, and weaving disappeared during the colonial period owing to competition from imported substitutes, and the deliberate suppression of the indigenous textile industry.

The practice of female seclusion penetrated into Nasarawan Doya during the 1930s.

Previously, Muslim Hausa women had been involved in a wide range of agricultural and non-farm activities. In the outlying hamlets, women engaged in most of the same agricultural activities as men, while in the village proper, women harvested low-lying crops such as beans and peppers, and brought in the harvest. With the advent of seclusion, women gradually withdrew from these agricultural activities. This process coincided with the disappearance of local crafts, many of which were practised by women, particularly pottery, spinning and weaving. This resulted in a significant narrowing of women's economic activities to little more than crop processing, the production of snacks and condiments, and petty trade. For some time after the introduction of seclusion, some women continued to farm through the agency of hired labour, but this became increasingly uncommon from the 1970s owing to the rising cost of land, labour and inputs.

A range of new activities began to penetrate into the village from the latter half of the colonial period. Local sugar production was regarded as a new activity, which came into the village during the 1930s or 1940s. From the 1950s, various modern crafts and services were introduced into the village from the surrounding towns. The first modern tailor with a sewing machine was a native of Zaria city who came to Nasarawan Doya in the 1950s. Thereafter, indigens of the village went to Zaria to learn tailoring, and returned to practise the trade in the village. The first bicycle repairman, a native of Nasarawan Doya who trained in Zaria, began practising in the village in the 1950s or 1960s. Commercial grinding machines, owned by prosperous local farmers, began to appear during the 1970s.

Also during the late colonial period, Yoruba traders began to bring imported manufactured goods to the village market to sell on credit -- goods such as cloth, pots, dishes, plasticware, palm oil and salt. They were followed by Igbo traders who brought such goods as medicine and bicycle parts, and by the 1960s had begun to open shops in the village selling a range of basic consumer manufactures. The first Igbo shopkeeper came much later, around the mid-1980s, and others have since followed.

Employment in the formal sector has been consistently low, owing to the lack of industry in the area and the pervasive lack of Western education among local people. During the 1970s, some village indigens found employment as teachers and low-level civil servants. Opportunities for formal sector employment narrowed during the 1980s, but have increased since the early 1990s with the creation of Makarfi Local Government and the privatisation of the Makarfi toll gate. Overall, however, levels of formal sector employment remain very low.

### ***Current Patterns of Non-Farm Activities***

The non-farm activities of the late 1990s are characterised by a high level of diversity, combining surviving traditional activities with a range of modern activities. Because of the nature of non-farm enterprises in the area, which involve seasonal activities as well as many activities performed within the confines of family compounds, an exact census of non-farm enterprises in the village would have involved a research project in itself. As a proxy, a survey

of visible activities was conducted within the three wards of the main village, and then supplemented by information from discussions with local informants as to the less visible activities. This was used as a basis for the selection of a stratified sample of 50 enterprises, which targeted two to three of each of the major activities represented in the survey, depending on their numerical importance. 'Major' was defined to mean either numerous or economically prominent. Where relevant, the selection targeted a large-scale and small-scale enterprise in each category.

Overall, the enterprise sample contained 15 female-headed enterprises, and 35 male-headed enterprises. The sample was stratified economically on the basis of the current capital costs of starting up such an enterprise. Those that would cost N2,000 (US\$ 22.00) or less to start up were grouped in the lower stratum, while those that cost over N 2,000 to start up were grouped in upper stratum. Current start-up capital for lower-stratum enterprises averaged N584 (US\$ 6.49), while that of upper-stratum enterprises averaged N31,760 (US\$ 352.89). 50 per cent of the enterprises fell into upper stratum, and 50 per cent into the lower. This symmetrical distribution was not by design, although the effort to include large and small-scale representatives of various types of enterprises undoubtedly contributed to this symmetry, which represents a significant over-representation of upper-stratum enterprises within the population. 80 per cent of the female-headed enterprises were in the lower stratum, compared to only 37 per cent of the male enterprises. Table 5.1 indicates the share of the major enterprise categories in the sample, along with their gender and socio-economic bias.

Just over one half of the enterprises in the sample were established since the onset of adjustment in 1986, and 26 per cent since 1992. Only 68 per cent of the enterprises were owned by indigens of Nasarawan Doya. Of the remaining 32 per cent, 8 per cent of the operators were from villages and towns in other parts of Kaduna State, and 18 per cent from Kano, Jigawa and Katsina States, and Niger Republic, all of whom operated enterprises in the lower stratum. The final 6 per cent were from south-eastern Nigeria, and all operated enterprises in the upper stratum. The majority of the non-indigens came to Nasarawan Doya after the imposition of structural adjustment in 1986.

**Table 9: Composition of the Enterprise Sample**

Enterprise category	% share	% in upper stratum	% female-headed
High income traditional crafts	4	2	0
Religious professionals	4	0	0
Food & beverages	16	2	14
Agricultural processing	14	10	4
Clothing, hair & related services	10	10	4

Carpentry & modern building	2	2	0
Modern crafts & services	8	2	0
Transport	8	6	0
Retail & petty trade	8	2	6
Wholesalers & shopkeepers	12	12	2
Agric. & informal sector wage labour*	14	2	0
Sample total	100	50	30

Source: Fieldwork

\* The main activities within this category are agricultural wage labour and wage labour in local sugar production.

This data is reflective of the continued existence of a three-way division of labour in non-farm activities, among men, women and certain categories of non-indigens. 'Strangers' from southern Kaduna State, from the drier areas to the north, and even from Niger, come to the village as agricultural and casual wage labourers, tinkers, and other such itinerant activities. Those from southern Nigeria continue to dominate the retail trade in manufactured goods, such as provisions and medicines. Women are confined largely to activities deemed compatible with their domestic and secluded role, such as snack and food production, crop processing, petty trade and tailoring of women's clothes. Men engage in a range of traditional male crafts, modern craft and services, male agricultural processing activities, transport activities, retail and wholesale trade, and a various forms of wage labour.

All of the enterprises in the sample were located in Nasarawan Doya, though two of them were branches of other enterprises located in nearby towns and villages. 12 per cent of the enterprises had moved to Nasarawan Doya from a previous location, though all of them were run by non-indigens largely from other parts of northern Nigeria, and fell overwhelmingly in the lower stratum of enterprises. This is consistent the observation made above that strangers from other parts of the north predominate in largely itinerant, low-income activities. In most of these cases, including those opening branches of other enterprises, the direction of enterprise movement was from larger to smaller centres. This coincided with the more general perceptions of non-farm operators themselves, who were more aware of enterprises moving to the village from the towns, than moving out to the towns from the village.

Regarding the location of their commercial activities within the village, 38 per cent operated from their homes, most of them in the lower stratum, 16 per cent operated in shops, all in the upper stratum, 20 per cent conducted their activity in an open space in the village, 12 per cent on farms, and the rest in assorted locations, including the market.

The enterprise sample reflected a relatively low level of access to education and skill formation. The educational profile showed that 86 per cent of the operators had Koranic or no

education, and only 8 per cent had some primary education or higher, including one operator with tertiary education. The remaining 4 per cent classified themselves as 'other'. All of those with primary education or higher operated enterprises in the top stratum, and involved a majority of locals and one operator from south-eastern Nigeria. 28 per cent of the sample had done some form of apprenticeship, 16 per cent of them in the upper stratum of enterprises.

Many of those in the lower stratum had no previous activity, while the majority of those in the upper stratum came into their activity from farming, crafts and large-scale trade. In fact, levels of agricultural production were positively associated with the capital level of non-farm enterprises. Among operators in the upper stratum, average agricultural production levels of the main crops were nine times the production level of operators in the lower stratum.

Interestingly, only 24 per cent of the non-farm enterprises in the sample were seasonal, while 76 per cent of the enterprises operated all year round, rising to 80 per cent in the upper stratum. This challenges the persistent assumption that non-farm activities are largely seasonal in nature.

### ***Labour and Employment***

Under current conditions, the contribution of non-farm activities to employment generation within the village remains fairly restricted. 54 per cent of the enterprises in the sample were owner operated, rising to 72 per cent in the lower stratum of enterprises, and 73 per cent among female-headed enterprises. Levels of employment generation among the remaining enterprises that employed some additional labour were very low. Within the enterprise sample as a whole, employment in non-farm activities averaged only 1.0 additional worker (Table 5.2). Disaggregated by socio-economic stratum, the level of employment was 1.8 workers in the upper stratum and 0.4 workers in the lower stratum. Most of the labour used in these enterprises consisted of apprentices and family labour, both of which upper-stratum enterprises and male-headed enterprises seem significantly better able to command.

**Table 10: Labour Use in Non-Farm Enterprises**

Enterprise category	% owner operated	Average no. of employees	Average no. of apprentices	Average no. of family workers	Total average no. of workers
Upper	36	0.2	0.8	0.8	1.8
Lower	72	0.0	0.1	0.4	0.5
Male-headed	46	0.1	0.4	0.7	1.2
Female-headed	73	0.0	0.0	0.4	0.4
Sample average	54	0.1	0.3	0.6	1.0

Source: Fieldwork

A consideration of medium-term changes in labour use suggests a somewhat more encouraging picture. According to respondents' recollections of labour use in their enterprises five years before, the use of employees has risen 150 per cent, all in the upper stratum of enterprises. Use of apprentices has risen by 133 per cent, and use of family workers has risen by 200 per cent. However, disaggregation of this data shows that lower-stratum enterprises have been less successful in increasing their total levels of employment, and among female-headed enterprise, total employment levels have actually fallen slightly.

This data indicates an overall shift in employment patterns in favour of family workers. Interviews suggest that, while several enterprises in the upper stratum are felt to be more profitable, they are not sufficiently profitable to sustain a proportionate expansion in the hiring of paid employees and apprentices. Rising wage costs in the face of uncertain markets have limited the use of paid employees. Under the economic conditions of adjustment, access to and control of apprentices has also become more difficult, because of the financial pressures on apprentices to start generating their own incomes, and the high start-up costs of many of the more lucrative enterprises. Within this context, the ability to control family labour has become a critical aspect of the current expansion potential of non-farm enterprises. The ability to control family labour is in turn heavily dependent on the ability to meet conventional obligations for household provisioning, particularly in terms of food, clothing and ceremonial costs, especially marriage and naming ceremonies.

### *Sources of Capital and Credit*

The major supply-side factors investigated were sources of capital and credit, and access to inputs and equipment. An examination of sources of start-up capital showed agriculture to be the most important single source, accounting for start-up capital in 36 per cent of enterprises overall, representing 56 per cent of upper-stratum enterprises, but only 16 per cent of lower-stratum enterprises (Table 5.3). Within the category of those who obtained their start-up capital from agricultural sources, the overwhelming majority of upper-stratum enterprises obtained it from farming. By contrast, all of the lower-stratum enterprises with an agricultural source of capital obtained their capital from livestock production. This is consistent with evidence that less well-off agricultural households use most of their farm produce to meet basic household needs, and have little left over for investment in non-farm activities. Inevitably, agricultural sources of start-up capital were more important for men than for women. 43 per cent of men obtained their start-up capital from agriculture, compared to only 20 per cent of women, most of whom depended on livestock rather than farming.

**Table 11: Sources of Start-Up Capital for Current Non-Farm Enterprises  
(% of total)**

Enterprise category	Agriculture	Assistance from rural relative	Rotating credit group	Bank loan	Sale /mortgage of land	Other
Upper	46.0	24.0	4.0	4.0	0.0	22.0
Lower	16.0	32.0	0.0	0.0	4.0	48.0*
Male-headed	42.9	20.0	2.9	2.9	0.0	31.3*
Female-headed	20.0	46.7	0.0	0.0	6.7	26.6
Sample average	36.0	28.0	2.0	2.0	2.0	30.0*

Source: Fieldwork

\* Figure includes enterprises with no start-up capital needs, which comprise 12 per cent of entire sample.

The next most important source of start-up capital was assistance from rural relatives, which accounted for 28 per cent of the sample. This represented the most important source of capital for female-headed enterprises, with 47 per cent of women, compared to only 20 per cent of men depending on this source. It was also a more important source of capital for lower-stratum enterprises. 32 per cent of lower-stratum enterprises obtained their start-up capital from this source, compared to 24 per cent of upper-stratum enterprises. Interestingly, none of the entrepreneurs indicated assistance from urban relatives to be a source of start-up capital, although this was included among the answer options.

Rotating credit groups and bank loans played a predictably minor role in the provision of start-up capital, and only in the context of upper-stratum male-headed enterprises. While the extremely limited and male-centred role of bank loans is unsurprising, the findings on rotating credit groups raise questions about the conventional assumption that rotating credit groups play an important role in funding informal economic activities among African women. Owing in part to the restrictions imposed by seclusion, rotating credit groups are not common among rural Hausa women, and, under the economic pressures of adjustment, are noted more for their collapse than for their development (Imam 1993; Meagher forthcoming).

Perhaps more predictably, sale or mortgage of land was rarely used as a source of non-farm capital, and only among female-headed enterprises in the lower stratum, where farming is not perceived as an economic option. Among men, relinquishing control of land in order to fund non-farm enterprises is not perceived as a rational economic strategy. In fact, as earlier findings suggest, the overall economic strategy is quite the reverse: young men enter into non-farm activities in order to obtain money to buy more land.

'Other' sources of start-up capital constitutes a relatively large category, owing to the large proportion of non-farm activities which required no start-up capital, predominantly wage labour



in various categories of agricultural and non-farm enterprises. Also included in this category were those who funded their non-farm activities from previous non-farm activities, which accounted for 6 per cent of the sample, all male-headed upper-stratum enterprises.

Sources of capital for running non-farm enterprises showed a similar pattern of division by socio-economic stratum and by gender. 56 per cent of upper-stratum enterprises, and 51 per cent of men obtained the capital for running their non-farm activities largely from their non-farm profits. 44 per cent of lower-stratum enterprises, and 80 per cent of women, obtained their running capital from assistance from relatives or spouses.

Credit appeared to play a surprisingly minor role in the financing of non-farm activities. 76 per cent of the sample claimed not to use credit, rising to 80 per cent among male-headed enterprises, and 92 per cent among upper-stratum enterprises. However, only 46 per cent of the sample claimed they had no need for credit. An additional 18 per cent did not use credit because they were unable to obtain it. This was biased heavily toward lower-stratum (28 per cent) and female-headed (33 per cent) enterprises. Another 8 per cent of the sample claimed not to use credit because they were not able to repay it, and another 2 per cent because they preferred not to spend more than they had.

The picture that emerges from this data is one in which a large proportion of male-headed and upper-stratum enterprises got their initial capital from crop-based agriculture, and thereafter many were able to set up relatively self-sustaining non-farm enterprises. In actual fact, there is a great deal of cross-funding between agriculture and non-farm enterprises among farming entrepreneurs owing to the economic dynamic of seasonality. However, the majority of male-headed and upper-stratum enterprises considered themselves to be relatively self-sustaining, and to have limited need of credit.

By contrast, female-headed and lower-stratum enterprises were heavily dependent for both start-up and running capital on various forms of assistance from spouses and rural relatives. In such enterprises, capital is regularly run down by household and unavoidable ceremonial expenses, as well as by rising costs and weakening markets, making entrepreneurial survival heavily dependent on maintaining goodwill through participation in various forms of kinship and friendship networks. While the need for credit is greater among these categories of enterprises, access to credit is severely limited by weak repayment capacity and the comparative poverty of the social networks to which these categories of non-farm operators have access.

### ***Access to Inputs and Equipment***

The situation of access to inputs and equipment has been negatively affected by the inflationary pressures of adjustment. The evidence presented above indicates that the ability to overcome inflation-induced constraints through access to credit is extremely weak. Table 5.4 shows the relationship of inflation rates of equipment, inputs, and major output over the past five years. The data indicate that, on average, output prices have risen much more slowly than input and equipment prices, particularly in the lower stratum. Overall, equipment prices have risen by an

average of 114 per cent, input prices by 228 per cent, while output prices have risen by only 92 per cent. Surprisingly, female-headed enterprises appear to have fared better than other enterprise categories in keeping pace with inflation. Among lower-stratum enterprises, 32 per cent felt that they had been unable to raise their prices sufficiently to compensate for rising input costs. 44 per cent claimed they were forced to shift to a smaller scale of operation because they could not afford to buy inputs in bulk. Among upper-stratum enterprises, 54 per cent indicated that they had resorted to buying cheaper quality inputs or adulterating their inputs with cheaper substances in order to cope with the high cost of inputs.

Similar problems arose in the case of equipment. 40 per cent of enterprises reported problems with access to equipment. Particularly in the case of upper-stratum enterprises, the equipment required has no local equivalents. Such items as sugar cane crushing machines and certain types of mechanics tools, not to mention sewing machines and cameras, cannot be manufactured locally, since they require processes and levels of precision which are not available at the village level. 60 per cent of upper-stratum, and 40 per cent of lower-stratum enterprises reported that, despite the pressures of cost, they continue to acquire their equipment from nearby regional towns or urban centres, rather than opting for locally made equipment. Those who indicated they had no problems with access to equipment claimed that they had either acquired all the equipment they needed before the beginning of the structural adjustment period, or that their activity did not require costly equipment.

**Table 12: Inflation Levels of Major Equipment, Input, and Output Costs Between 1992 and 1997**

Enterprise category	% change in equipment costs	% change in input costs	% change in output prices
Upper	102	251	101
Lower	151	126	85
Male-headed	112	239	86
Female-headed	199	174	186
Sample average	114	228	92

Source: Fieldwork

In attempting to cope with the high cost of equipment, the two main strategies employed by lower-stratum enterprises was to resort to local, often jerryrigged, repairs, and to downgrade their equipment use to simpler technologies. The two main strategies employed by upper-stratum enterprises was to resort to local repairs, and to buy less equipment than they needed for the activity. The implications of these adjustments for the technical level of local non-farm enterprise are not encouraging. They imply a trend toward technical regression rather than development or innovation.

### *Demand-Side Factors: Competition and Markets*

One of the major reasons behind the inability of many enterprises to defend their output prices against inflation was the pervasive situation of intensifying competition and weakening local demand. As previous studies have indicated, the major source of demand for the output of non-farm activities in the African context comes from rural households in the village and surrounding rural area, and is heavily dependent on rising agricultural incomes (Haggblade et al 1989; Leidholm *et al.* 1994; Delgado *et al.* 1994). In Nasarawan Doya, 80 per cent of the enterprise sample indicated that their main customers came from local farming households, where purchasing power was far from buoyant. Only 14 per cent derived their main source of demand from traders and other businesses with access to a wider market, and these were concentrated in upper-stratum enterprises (20%).

The concentration of demand for non-farm output within the local consumer market resulted in a situation in which the proliferation of non-farm activities has tended to further weaken demand and undermine profits. Particularly among lower-stratum enterprises with relatively low start-up costs and low skill requirements, competition from others entering the activity combined with the low level of local purchasing power were felt to place downward pressure on profits. In the lower stratum, competition was felt to be generated largely by the intensifying economic pressures on local households, forcing household members into a range of low cost activities, despite weakening effective demand. In interviews, operators in lower-stratum activities repeatedly complained of the lack of demand. As one female snack producer put it, capital is a problem, but even if you get the capital, there is no market. Among the majority of lower-stratum operators who felt that competition was not a problem, the reasons given were that the lack of demand prevented people from entering the activity, or that the capital costs of that particular activity were too high for most current entrants to afford.

Upper-stratum enterprises faced a somewhat different demand situation. Their higher skill levels and higher capital costs provided a certain protection from increased competition. Particularly among the better established enterprises in this category, the poorer training, equipment and workmanship of new entrants tended to protect rather than erode their market. In many other cases, the activities pursued represented a response to new non-farm opportunities opened up by adjustment, and as such, demand had increased in these activities rather than declined. 44 per cent of upper-stratum enterprises said that they faced increased competition because the activity was profitable, and 24 per cent said they faced no increased competition because the activity was too costly for most people to start up. In most of these cases, competition was not felt to be a problem. It is worth noting, however, that 12 per cent of upper-stratum enterprises complained that they face increased competition from *urban* informal sector goods which are penetrating rural markets in response to the saturation of urban informal markets.

In the face of weak effective demand, particularly among lower-stratum and female-headed

enterprises, granting credit and giving discounts to customers had become an important competitive strategy. 72 per cent of the sample claimed to grant credit and give discounts more now than they did five years ago, rising to 76 per cent of lower-stratum, and 87 per cent of female-headed enterprises. Thus, the category of enterprises least able to obtain credit are those most obliged to grant credit in order to sustain their market. These competitive practices have the effect of further squeezing profits, particularly among the categories of operators who can least afford it.

### ***Incomes and Income Use***

The upshot of the differential impact of supply and demand pressures on non-farm enterprises is a substantial variation in income levels between upper and lower-stratum enterprises, as well as between male and female-headed enterprises. Total average profits per month for all the enterprises in the sample were N3,320 (US\$ 39.00). While profits from lower-stratum enterprises averaged N1,588 per month, those from upper-stratum enterprises averaged just over N5,000 per month. Similarly, while women earned an average of N1,017 per month from their non-farm activities, men earned an average of N4,306. This indicates a significant gap between the non-farm income-generating capacity facing men and entrepreneurs with substantial capital, relative to women and entrepreneurs with minimal capital.

In the inflationary context of adjustment, the purchasing power of non-farm earnings was continually being undermined by rising prices. 58 per cent of the sample maintained that their non-farm earnings did not buy as much as they did five years previously, rising to 64 per cent of lower-stratum enterprises, and 73 per cent of female-headed enterprises.

The dominant use of non-farm incomes varied somewhat less with enterprise stratum. 62 per cent of the sampled enterprises used the proceeds of their non-farm activities for consumption expenditure only, with no significant variation between enterprise strata. An additional 12 per cent combined consumption expenditure with investment in non-farm or agricultural activities. 20 per cent re-invested their non-farm incomes in non-farm activities, and 2 per cent invested their non-farm incomes in agriculture. All expenditure pattern which indicated any component for reinvestment in non-farm or agricultural activities were heavily biased toward the upper stratum of enterprises. This suggests that incomes from lower-stratum enterprises are too close to the survival line to allow for significant investment in productive activities.

### ***New Pressures and New Opportunities in the Non-Farm Sector***

From the information presented above, it is clear that the combination of economic forces unleashed by structural adjustment has generated both winners and losers within the non-farm sector. The losers are those in activities with low barriers to entry, who face intensifying competition in a context of weak or declining markets, as well as those in activities with slightly higher barriers to entry whose rising input costs have not been compensated for by

commensurate increases in demand. Many categories of food and snack production, wage labour, petty trade and traditional crafts fall into this category. Unfortunately, these are also the activities that absorb the most labour within the village, particularly from the ranks of low income households. This has clearly negative implications for the promotion of non-farm activities in the service of poverty alleviation.

The case of the village blacksmiths illustrates some of the complexities of the situation of losers in the adjustment game. From the perspective of skills, capital costs, and social barriers to entry, blacksmithing is a highly protected activity, and it is certainly an activity in which local demand has been boosted by adjustment, owing to the increased tendency of people to resort to local repairs of tools, rather than to buy new items or take the repairs to welders or other specialists in town. But the head of the local smithing family claimed that the profitability of his smithing enterprise had declined under adjustment because of the rising cost and increasing scarcity of his major raw material, scrap metal. Over the past decade, the devaluation of the naira has intensified the recycling activities of urban industry, creating dramatic upward pressure on the cost of and urban demand for scrap metal. Largely as a result of these pressures, the blacksmith claimed that he could no longer get the metal he needed by going to Zaria. He often had to go farther afield, to Funtua, Kaduna or even Kano. The higher cost of metal, and the increased cost of finding it, had forced him to resort to buying in smaller quantities. This reduced the amount of goods he was able to produce for sale in Makarfi, the major market in the area.

Unfortunately, the pressures of rising input costs have stifled some of the blacksmith's innovative ideas. He tried his hand at producing bicycle and motorcycle carriers, but had to abandon it because the market was too weak at the village level. He was confident that these items would find a sufficient market in the town, since they are cheaper than the industrially made version, but he did not have enough capital to produce in sufficient quantity to sell in the town. He was also hampered in another area where demand for his services has been expanding: the repair of local machinery. While he can improvise some basic repairs for bicycles and motorcycles, he said he lacked the skills to repair grinding machines or any other precision machine, but declared a willingness to learn, if training was available.

The other side of the non-farm story is, of course, the range of new economic opportunities opened up by the realignment of economic forces under adjustment. Principal among these are local sugar production and local retailing of manufactured goods. The case of local sugar production represents a situation of increased regional, rather than local, demand for an inferior good in the face of inflation and falling real incomes. Increased demand for local sugar dates from the late 1980s, a claim corroborated by the fact that 67 per cent of those engaged in local sugar production in Nasarawan Doya entered the activity since the beginning of the adjustment period. Initially, local producers took their sugar to Makarfi market, but since the early 1990s, the demand for local sugar has increased to a point that traders from urban centres as far as Kano, Sokoto and even Minna now come into the village to purchase sugar from those who

association between the scale of agricultural production and success in the non-farm sector casts serious doubt on prospects for developing non-farm activities in order to compensate for pressures on agricultural incomes.

The overall picture that emerges from the enterprise sample is one of relatively limited and short-term accumulation potential at the top, and a mass of survival activities at the bottom, in which incomes are increasingly depressed by severe economic pressure in both the agricultural and the non-farm sectors. The few lucrative non-farm opportunities available are being seized largely by wealthy villagers or young entrepreneurs from southern Nigeria who move into the village from larger rural or urban centres. Contrary to the thesis of rural non-farm expansion (Baker & Ove Pedersen 1992; Bryceson 1996), the prevailing direction of enterprise movement has been from larger to smaller centres, driven predominantly by the saturation of the urban informal sector. Women's non-farm activities appear to be particularly disadvantaged by the current economic situation, owing to the combination of a relatively strict gender-division of labour with women's limited mobility, lack of participation in agriculture, and limited alternative sources of capital.

### **Non-Farm Activities and Rural Livelihood Strategies**

The analysis of non-farm activities from an enterprise perspective has focused on an assessment of the prospects of this sector as an alternative to agriculture within the context of structural adjustment. The enterprise perspective is useful as a means of indicating constraints and opportunities within the non-farm sector, the differential effects of these on different categories of enterprises, and as a means of capturing the role of migrants from outside the village community. However, owing to the purposive design of the enterprise sample, it tells us little about the relative importance of these activities in the village as a whole, and virtually nothing about the ways in which non-farm activities interact with agriculture in the context of individual and household-level livelihood strategies. In order to capture these very vital dimensions, we must return to the initial sample of village households to investigate the role of non-farm activities in wider structures of livelihood and accumulation.

### ***Patterns of Participation in Non-Farm Activities at the Household Level***

From the household perspective, the most striking feature of non-farm participation in Nasarawan Doya is its extreme variability. Among household heads as well as dependants, men as well as women, participation in non-farm activities was found to vary according to season, economic circumstance, competing household demands, and shifts in the macro-economy. This, combined with the tendency to pursue multiple activities in certain seasons, made it extremely difficult to calculate participation rates for the various categories of non-farm activities. The percentage of household members indicating that they did not participate in any non-farm activity varied dramatically according to the season in which the question was asked. Furthermore, some household members might pursue three different activities in the same

category, for example snack production, throughout the year, while others might have two or more different activities in different categories which they followed for only one season. In order to avoid any ambiguity, participation in a non-farm activity is, unless otherwise indicated, defined here as participation in any number of activities in a given category, at any point during the year under study. It should be noted that the figures for non-farm participation include participation in agricultural wage labour.

Table 6.1 shows the participation rates in the various categories of non-farm activities for different categories of household members. These participation rates were obtained from the monitoring of economic activity throughout the year. Among men, the highest rate of non-farm participation was in agricultural and informal wage labour (largely related to sugar production). While the participation of household heads in informal wage labour was relatively high (37.5 per cent), this activity category was weighted heavily toward male dependants, among whom the participation rate was 91.3 per cent, leading to an overall male participation rate of 57.1 per cent. The second most important activity among men was trade, dominated by household heads, while the third ranking activity was agricultural processing, also weighted heavily in favour of household heads and dominated by local sugar production.

**Table 13: Non-Farm Participation Among Household Members**

Activity category	Men	Household heads	Women
Agric. & informal sector wage labour	57.1	37.5	1.5
Traditional crafts & load carrying	19.5	22.5	1.5
Religions professionals	1.6	2.5	0.0
Food & beverages	0.0	0.0	76.5
Agricultural processing	23.8	37.5	11.8
Trade	34.9	42.5	27.9
Clothing, hair & related services	1.6	0.0	1.5
Carpentry & modern building	0.0	0.0	0.0
Modern crafts & services	3.2	5.0	0.0
Transport	3.2	5.0	0.0
Asset rental	1.6	2.5	0.0
No non-farm activity	0.0	0.0	7.4
Total	156.5*	155.0*	128.1*

Source: Fieldwork

\* Respondents may pursue more than one category of activity in the course of a year.

Women's non-farm participation was heavily concentrated in food and beverage production, in which 76.5 per cent of women participated, followed distantly by trade, at 27.9 per cent, and even more distantly by agricultural processing (11.8%) which refers essentially to manual crop threshing. Among women, trade was dominated by the micro-retailing of non-agricultural commodities (largely manufactured household necessities brought in from the rural towns and cities). By contrast, among male household members, participation in trade was dominated by agricultural commodities, both local (grain and livestock) and from southern Nigeria (oranges and kola).

The rates of non-participation in the non-farm sector were found to be extremely low, with no men and only 7.4 per cent of women having no non-farm activities at any point in the year.<sup>4</sup> Owing to the fact that many respondents engage in two or even three different types of activities, the total of participation rates and non-participation rates is over 100 per cent. On average, men engage in 1.6 different categories of activities in the course of a year, though many men also engaged in more than one activity of the same type. For example, those engaged in agricultural processing activities may combine local sugar production with the operation of a grain grinding machine, while traders may be involved in grain trading in one season and retailing of provisions in another. Although many women also engage in multiple activities, they average only 1.3 different types of activity per year, indicating a narrower range of activities, as well as a lower level of multiple engagement.

The data presented corroborates earlier indications of a sharp gender division of labour within the non-farm sector. What it does not show is the equally stark socio-economic division in access to particular non-farm activities. Among men, activities such as sugar production, and modern crafts and services, which are comparatively lucrative as well as being capital and skill intensive, are almost wholly dominated by operators in upper-stratum households. Conversely, activities such as traditional crafts and load carrying, and informal wage labour, which have relatively few barriers to entry and comparatively low returns, are heavily biased in favour of lower-stratum households. Among women, the two major female activities, food and beverage production, and trade, showed a slight bias in favour of upper-stratum households, since access to any capital at all is a major constraint in women's non-farm activities. The most capital intensive women's activities, found only in upper-stratum households, were speculative crop trading (included under trade) and tailoring. The only categories biased in favour of lower-stratum women were agricultural processing -- which involves essentially the sale of processing labour with minimal capital outlay -- and no activity at all.

The seasonal variation in rates of participation in the non-farm economy is indicated in

---

<sup>4</sup> It should be noted that the non-participation rate for household heads differs significantly from data obtained in the main sample, in which 12 per cent of household heads indicated that they did not participate in any form of non-farm activity. The difference may arise from differences between the main and sub-samples (which seems unlikely given the random selection of the sub-sample), or from differences between what heads actually do relative to what they perceive themselves to be doing. In the main sample, heads were simply asked if they pursue any non-farm activities, while in the sub-sample, they were monitored on a seasonal basis.



Table 6.2. By contrast with Table 6.1, the rates of non-participation are much higher when disaggregated seasonally. While all men participated in some form of non-farm activity at some point in the year, in any given season male non-participation ranged from 16 per cent in the harvest season (the season traditionally devoted to non-farm activities), to 43 per cent in the hot season. It should be noted that the season of lowest male participation in non-farm activities, the hot season, is also the season of least agricultural activity. It is in part because of the lack of agricultural activity that the hot season holds little in the way of male non-farm opportunities. It is outside the season of two of the mainstays of male non-farm involvement, agricultural wage labour and local sugar production, which are linked to the agricultural activities of cultivating and harvesting. Owing to a lack of capital combined with the general absence of wage labouring opportunities, male dependants were particularly affected by the shortage of non-farm opportunities during the hot season. 78 per cent of male dependants had no non-farm activity during this season, compared to only 22 per cent of household heads, who have more capital to invest in various forms of self-employment less directly dependent on the agricultural cycle.

**Table 14: Seasonal Participation Rates in Non-Farm Activities Among Household Members (% of Category)**

Season	Household heads	Male dependants	All men	Women
Wet	78 (22)	87 (13)	81 (19)	79 (21)
Harvest	92 (8)	70 (30)	84 (16)	69 (31)
Hot	78 (22)	22 (78)	57 (43)	57 (43)

Source: Fieldwork

Note: Figures in brackets represent non-participation rates.

Disaggregating male participation, the period of greatest non-farm participation among household heads was in the harvest season (92 per cent participation, or 8 per cent non-participation), when rains cease, crops become available for trading, and villagers have some liquidity to be translated into non-farm capital and effective demand. Among male dependants, the period of greatest non-farm participation took place in the wet season (87 per cent, or 13 per cent non-participation), when agricultural wage labouring jobs abound. Among household heads, the rate of non-farm participation during the wet season, though not the highest, is still surprisingly high. 78 per cent of household heads, and 81 per cent of males overall, were engaged in non-farm activities during the wet season, the peak season for agricultural activity. This raises questions about the extent to which economic change may have shifted non-farm activities from a position of seasonal complementarity with agriculture, to one of competition for agricultural labour time, particularly among households with limited access to hired labour.

Among women, the highest non-farm participation rates occurred during the wet season, when 79 per cent of women pursued some form of non-farm activity. This appears to relate to the expansion of the snack market during the agricultural season. As in the case of men, the hot season represented the season of lowest non-farm participation, with only 57 per cent of women engaged in a non-farm activity.

The data on non-farm participation rates provides some indication that involvement in non-farm activities has increased over the past two decades, particularly among males. Data collected in the early 1970s by Norman and his colleagues in villages around Zaria, indicated that 25 per cent of household heads, and 5 per cent of women had no non-farm activities (Norman's *et al.* 1982; Simmons 1975). The data from Nasarawan Doya, which also lies within the wider hinterland of Zaria, suggests a significant increase in male non-farm participation, and a marginal decrease in female participation. However, the conclusiveness of these comparisons is limited by the extreme variation of non-farm participation in the course of the agricultural year, as well as by variations between perceived and actual levels of non-farm participation. Adult males, in particular, tend to under-represent their non-farm participation, owing to the perception of non-farm activities as peripheral and often incidental to men's main activity of farming. Because non-farm activities are more strongly associated with women than with men in rural Hausa Muslim culture, non-farm activities perceived as peripheral or conjunctural were, in some cases, dismissed as a sort of occupational 'noise' rather than a 'real' economic pursuit. A sharper historical comparison would therefore require more information on the exact conditions under which the earlier data was obtained.

Further evidence suggesting an increase in male non-farm participation arises from the finding that, in Nasarawan Doya, 66 per cent of household heads entered their current activities since the beginning of the structural adjustment period in 1986. This is in part an indication of increased recourse to non-farm sources of income, and in part an indication of a tendency of shift out of certain non-farm activities and into others, owing to changes in the profitability or affordability of various activities under structural adjustment. This process has tended to reinforce the non-farm income differentiation between households in the lower and upper strata. Members of lower-stratum households routinely lack the resources to make timely shifts in activities in response to changing opportunities, and are more constrained to shift into relatively low-cost, low-return activities when they do make a change.

A look at the locations of the activities abandoned in the process of shifting into currently held activities suggests that non-farm activities have also become more locally based than was the case before the structural adjustment period. 39 per cent of the activities abandoned were in locations outside of Nasarawan Doya, including almost 20 per cent carried out in the Lagos/Ibadan area. Many of these were trading activities, abandoned because of the rising cost of goods and transport. By contrast, the survey of currently held activities found that only 15 per cent of household heads practised non-farm activities outside Nasarawan Doya and the outlying hamlets. Only 6 per cent, mostly traders, practised their activities in the nearby

agricultural bulking markets of Sundu and Makarfi, and a mere 7 per cent in Lagos/Ibadan. Although participation in non-farm activities appears to be increasing among male villagers, the geographical scope of these activities appears to be narrowing, concentrating a growing number of activities within increasingly local, and economically weakened, markets. It should be noted that the bulk of these changes involve failing long-distance traders rather than migrants, and, as will be demonstrated subsequently, does not indicate a high level of return migration, nor any significant return flow of skills or capital into the village.

### *Non-Farm Livelihood Strategies*

Investigating the structure of participation by household members in various non-farm activities generates useful information about the relative importance of particular categories of non-farm activity. However, in order to appreciate the role played by non-farm activities in *household*, rather than individual, livelihood strategies, it is necessary to look at the non-farm profiles of entire households, rather than surveying levels of participation of individuals in various categories of activities. Household non-farm profiles more effectively illustrate the extent to which the role of non-farm activities in household livelihood strategies is influenced by access to capital and skills within the household, rather than simply by individual access to new opportunities.

The first profile is of the poorest household in the sample. This household has 4 members, but only 2 are economically active. The household head does wet season, but no dry season, farming, and has only Koranic education. He has only one non-farm activity, which is to carry loads with his donkey. He also used to do small-scale trade, but had to abandon this activity in 1989 owing to a lack of capital. The head's one wife makes bean cakes only in the dry season. She abandoned the production of breakfast porridge in 1993 because she was not getting any profit. Both the head and his wife receive a substantial portion of their household income in the form gifts of money and clothing from rural relatives.

The second household is one of the richest households in the sample. This household has six economically active members. The head, who is a young man, has Western primary school education, and engages in wet and dry season farming. He also engages in local sugar production, trades in engines, and has a motorcycle and grinding machine which he uses for commercial purposes. He used to engage in wholesale crop trading, but shifted to sugar production in 1991 because he felt it was more profitable. The first wife of the household head trades in washing detergent, millet and groundnuts throughout the year. The second wife trades in cooked beans as well as tigernuts (*aya*), a local snack, for two of the three seasons of the year. She abandoned the production of bean cakes in 1996 because her daughter, who served as her sales agent, was married.

The eldest of three economically active male dependants in the household farms and engages in casual labour during the harvest season. The second male dependent is a farmer and tailor, and practises his trade in the wet as well as the dry season. The third male dependent

engages in agricultural wage labour during the wet season, sugar labour during the harvest season, and does brickmaking in the dry season, all in addition to farming.

These profiles suggest that the critical question of non-farm accumulation does not just revolve around the ability of individuals to participate in the more lucrative types of activities. It also concerns the ability of individual household members to engage in multiple activities, and the ability of households to maximise the participation of other household members in additional, preferably lucrative, forms of income generation. In better-off household, heads tend to use their superior resource position to contribute to the capital and skill base of wives and economically active dependants, which encourages a more collective, household-centred livelihood strategy. In poorer households, the weaker resource position of the head tends to have a more centripetal effect, throwing wives and dependants toward alternative networks of assistance, or more individualised livelihood strategies (Wallace 1978; Ross 1987). These differentiated patterns of household and individual livelihood strategies will be explored in more detail below.

### *The Importance of Non-Farm Activities in Total Labour Time*

It is clear from the evidence presented so far that non-farm activities play an important role in both individual and household livelihood strategies, but this still leaves open the question of the importance of non-farm activities relative to agriculture. Measuring the importance of non-farm activities requires an examination of their relative share in the labour time and incomes of household members.

An assessment of the share of non-farm activities in total labour time was based on a seasonal monitoring of the number of hours spent per week on personal and household agriculture, agricultural wage labour, other non-farm activities, and domestic work. The regular timing of the five muslim prayers was used to assist respondents in assessing how long they spent on the various categories of activities. The share of non-farm activities in total labour time involves the total of the time spent in agricultural wage labour and in other non-farm activities, as a percentage of the total time spent in all of the activities mentioned above.

Non-farm activities were found to account for an average of 36.3 per cent of total working hours in the course of a year. Disaggregated by gender, non-farm activities represented 28 per cent of women's total working time, and 46 per cent of men's working time (Table 6.3). Further disaggregating the data on male household members, heads were found to spend an average of 53 per cent of their time on non-farm activities, by far the largest share of any other category of household member. This is a surprising finding, given that household heads also have primary responsibility for household agriculture. However, the demands of agriculture appear to constrain heads', and male work time generally, only during the wet season. During this season, while household and own-account agriculture occupied 72 per cent of heads', and overall male, working time, non-farm work consumed 27 per cent of male working time, and domestic work accounted for the remaining 1 per cent. The share of male non-farm work rose

markedly in the remaining two seasons, especially among heads, given their greater access to capital to fund non-farm activities off season. Among women, seasonal variations in non-farm work time were comparatively minor, owing to the relative lack of participation in agriculture. Domestic labour was the major competitor for women's work time, occupying an average of 72 per cent of women's work time across all seasons, while agriculture accounted for less than 1 per cent.

The share of non-farm activities in working time showed some variation by socio-economic stratum, though the direction of change varied according to gender. Upper-stratum women spent a slightly larger share of their time (29.2%) on non-farm activities than lower-stratum women (24.3%), while upper-stratum men spent a slightly smaller share of their time (44.2%) on non-farm pursuits than lower-stratum men (47.7%). This reflects the greater ability of men to hire labour when they intensify involvement in non-farm activities, while better-off women tend to intensify involvement in income-generating activities by shedding domestic chores onto junior women.

**Table 15: Time Spent on Agricultural and Non-Farm Activities as a Share of Total Working Time (%)**

Household members	Wet season	Harvest season	Hot season	Annual average
<b>Agriculture</b>				
Men	72.4	23.1	16.6	41.5
Heads of household	71.7	17.9	5.6	42.2
Women	1.3	0.0	0.4	0.7
<b>Non-farm activities</b>				
Men	26.6	76.3	56.8	45.6
Heads of household	26.8	81.3	78.4	52.7
Women	29.0	30.6	21.9	27.2

Source: Fieldwork

An examination of recent trends in time use indicates that women not only spend a lower overall share of their time on non-farm activities than men, they have reduced the amount of time they spend on non-farm activities since the early 1990s. The majority of women indicated they spend less time on non-farm activities now than they did five years ago. By contrast, the majority of men indicated they now spend more time on non-farm activities.

Women's non-farm involvement does not appear to have been constrained by increasing domestic demands, as a majority of women also indicated that they now spend less time on domestic work as well. Women claimed that their involvement in non-farm activities had declined owing to a lack of capital and declining markets for their activities. Most women

lacked the capital to shift into more profitable women's activities, such as speculative crop trading, and generally felt that the profitability of women's non-farm activities had declined since the early 1990s, owing to a lack of effective demand. The extremely narrow range of acceptable women's activities also limited their access to new opportunities. In addition to the general decline in profitability of their activities, women's capital was being further eroded by the rising cost of gifts for ceremonies, and, in many cases, the rising pressure of demands for household provisioning, which has tended to reduce the number of activities women are able to pursue.

In the case of men, rising involvement in non-farm activities does not appear to have been at the expense of their own farming activities. Barely one quarter of men indicated they spent less time on farming, while over 40 per cent said they now spend more time on farming. In contrast to women, men claimed that non-farm activities remained relatively profitable, although the additional income did not always keep up with the rising cost of living and farming. Perhaps more important in encouraging increased male involvement in non-farm activities was their stabilising effect on seasonal income levels, and the continued pressure of rising household and farming costs.

Judging by time-use data, non-farm activities appear to play a central, and increasing, role in male livelihood strategies. Despite the fact that men have virtually sole responsibility for farming activities, non-farm activities account for nearly half of their working time, and their overall share of men's working time appears to have been increasing. Women, despite being largely excluded from direct involvement in agriculture, spend less than one-third of their working time on non-farm activities, and even this level of involvement has been declining. An assessment of the implications of these countervailing trends for the overall economic role of non-farm activities requires a consideration of the weight of non-farm incomes in total household incomes.

### ***Non-Farm Incomes as a Share of Household Incomes***

Evidence of a significant reliance on non-farm sources of income was borne out by data collected on the main sources of household income in Nasarawan Doya. Gross household incomes were calculated on the basis of information collected on income from sold and unsold crops, sales of livestock and livestock products, non-farm activities and gifts. Owing to difficulties associated with the collection of precise income data in this context, the data on income in all categories represent gross takings, rather than income net of production costs. Table 6.4 shows the relative importance of these various income categories. In order to provide a more comprehensive picture of the relative importance of non-farm incomes, they were calculated as a share of household cash income, and also as a share of the total value of cash income and unsold agricultural produce.

**Table 16: Relative Shares of Household Income Sources**

Stratum	% gifts of total cash income	% livestock of total cash income	% crop sales of total cash income	% NFA of total cash income	% NFA of total cash & produce income
Upper	0.6	4.2	25.0	70.2	60.8
Lower	0.4	4.7	20.9	74.0	60.2
Sample average	0.6	4.4	23.4	71.6	60.6

Source: Fieldwork

The data indicates that, at the household level, non-farm income sources account for 72 per cent of total cash incomes, and 61 per cent of total cash and produce incomes. Surprisingly, there is comparatively little variation among household economic strata, although non-farm income shares are slightly higher as a share of cash income among lower-stratum households. Disaggregating the data by gender and household position reveals that, among household heads, non-farm incomes account for an average of 54 per cent of total individual cash income; among women, they account for 78 per cent of total individual cash incomes, and among male dependants, about 50 per cent of total cash incomes, with comparatively little variation among socio-economic strata.

Further disaggregating the data on income shares yields a number of interesting insights into the role of non-farm incomes in the determination of household income. First of all, the data on income shares corroborate the time-share data on the importance of non-farm sources of income in male livelihood strategies, even during the wet season. The findings indicate that household heads earned an average of 38 per cent of their annual non-farm earnings during the wet season, while male dependants earned 51 per cent of their non-farm incomes during the wet season. This reflects, in large part, the importance of agricultural wage-labour in male wet season incomes, and underlines the potential of increased dependence on non-farm activities to interfere with, rather than to complement, household agriculture.

A second illuminating finding is that the incomes of lower-stratum women were found to contribute more to total household income, both proportionately and absolutely, than the incomes of upper-stratum women. In lower-stratum households, women's incomes, which are predominantly non-farm, contributed 17 per cent to household cash income, compared to only 13 per cent in upper-stratum households.

This evidence appears to corroborate the findings of Hill (1977) and Matlon (1978) that women's predominantly non-farm incomes tend to moderate, rather than accentuate, rural income inequality. However, three important qualifications should be noted. First, the differential in the share of household cash income contributed by lower and upper-stratum women is fairly slight -- only 4 per cent. Secondly, differences in non-farm income levels do not account for the whole of the differential between the total incomes of lower-stratum and

upper-stratum women. 40 per cent of women's income differential is accounted for by gifts and sales of livestock. Finally, evidence of increasing pressure on women's incomes, particularly in lower-stratum households, suggests that any moderating impact they may have on household income inequality is being eroded in the face of current economic pressures.

Overall, the data on income shares indicates that non-farm incomes play a critical role in household incomes among both poorer as well as better-off households, significantly outweighing agricultural production in their contribution to household livelihoods. Non-farm incomes were found to account for nearly three-quarters of household cash income, and 60 per cent of household income in cash and kind. Moreover, there appears to be relatively little variation in the importance of non-farm incomes between upper and lower-stratum households. Available evidence suggests that, while female involvement in non-farm activities is under increasing economic pressure, male involvement in non-farm activities has increased, and in Nasarawan Doya, men perceive themselves to be more dependent on non-farm activities than in the past. The implication is that increased male involvement in non-farm activities has taken place within a context of an overall decline in their profitability, a trend which could only be motivated by a concomitant decline in the profitability of agriculture.

This assessment was borne out in the context of interviews with household members in Nasarawan Doya. Most men claimed that they rely more on non-farm activities than they used to, not because they are more profitable, but because farming has become less profitable. There was a general consensus among the majority of household members, both male and female, that real incomes from most non-farm activities have declined. The high cost of inputs and equipment, combined with weak markets were seen to have eroded the income potential of many of these activities. Those from better-off households maintained that some activities were more profitable now if one had the money to enter them. On the whole, however, it was felt that non-farm activities generated less in the way of real income than they had in the past.

One might conclude from this that, at least among the lower stratum of households, the economic preponderance of non-farm incomes in household livelihood strategies is more by default than by design. Rising agricultural production costs, combined with the rising cost of living, have made both household survival and continued participation in agriculture increasingly dependent on access to non-farm income. Among the upper stratum of households, the emergence of new non-farm opportunities has provided new avenues for accumulation, though not so much as an alternative to, as in conjunction with, agriculture.

### ***Non-Farm Activities and Agriculture: Investment Patterns and Occupational Identities***

The examination of the importance of non-farm incomes as a share of working time and of household income provides a useful indicator of the considerable economic significance of the non-farm sector. However, it tends to create an image of agriculture and non-farm pursuits as competing rather than complementary sectors. Attention becomes focused on competition for



labour time, relative contributions to household income, and relative levels of profitability, as though one sector gains at the expense of the other. This ignores the significant degree of economic interdependence that continues to exist between the two sectors, despite evidence of the encroachment of non-farm activities into seasons conventionally believed to be dominated by agriculture. An economic orientation which emphasises the economic interdependence of agriculture and the non-farm sector, rather than any economic competition between the two, is particularly evident if one examines patterns of investment, and the overall influence of current economic change on the formation of men's occupational identities. For obvious reasons, the economic relationship between agriculture and the non-farm sector is much less central to women's occupational strategies. Owing to differences in economic priorities and occupational opportunities, particularly influenced by their lack of involvement in agriculture, women display very different investment patterns, which will be considered in the subsequent section dealing with household welfare and social networks.

An analysis of men's investment patterns between sectors makes it clear that increased dependence on non-farm activities has not eroded the strong interdependence between non-farm and agricultural sources of income. When asked to indicate the sources of capital for investment in non-farm activities, crop sales were identified as the primary source by the majority of both household heads and male dependants. The dependence on agricultural sources of non-farm capital was particularly high among upper-stratum heads. By contrast, one-third of lower-stratum heads also depended to some degree on non-farm sources of capital (eg. wage labouring to get capital for petty trade), owing to their more limited ability to produce an agricultural surplus above household consumption and basic cash needs.

Non-farm activities had a much more limited role as a source of capital for re-investment in agriculture. Three-quarters of household heads indicated that the primary use of their non-farm earnings was for maintaining the household, while less than one-third of household heads indicated that they used their non-farm earnings for agricultural investment. While immediate household needs significantly constrained the ability of household heads to invest non-farm earnings in agriculture, non-farm incomes still figured second to crop sales as a source of resources for agricultural investment. Among upper-stratum households alone, non-farm activities figured as the most important source of capital for both land and input purchases, owing to the ability of upper-stratum males to pursue much more lucrative types of non-farm activity.

Given the emphasis on the symbiotic relationship between agricultural and non-farm incomes, the increasingly central role of non-farm activities in male livelihood strategies has not triggered any discernible shift in occupational identities in Nasarawan Doya. 99 per cent of the household heads, and 100 per cent of male dependants defined their primary occupation as farming. Perhaps more revealing, only 45 per cent of household heads indicated that they had any additional non-farm occupations which might also be defined as primary, despite the fact that all of them were found to pursue some form of non-farm activity, and that non-farm

activities occupied on average over 50 per cent of their working time and generated roughly 60 per cent of household income in cash and kind. In fact, an interview held with a group of men concerning the growing importance of non-farm activities broke into a debate concerning whether men have non-farm activities at all. It was argued by some present that non-farm activities are the preserve of women, and men are just farmers. Non-farm activities are perceived, not as occupational alternatives to farming, but as a means men employ to remain farmers, and where possible, to accumulate additional resources, some of which will be devoted to agricultural expansion. One villager later summed up the situation with a Hausa saying: if the drumming changes, the dance also changes. One adapts to the times, but that does not change what one is.

The strong attachment to agricultural identities despite high levels of economic dependence on non-farm activities should come as no surprise. Various studies have pointed to the resilience of agricultural identities despite increasing dependence on non-farm sources of livelihood among the rural poor (Williams 1988; Lennihan 1987). Whether the process was cast as diversification or proletarianisation, the result was a continued attachment to agriculture both as an activity and as a central feature of occupational identity. In the 1990s, with the contraction of opportunities for rural migration and increased pressure on the profitability of large-scale agriculture, the central issue for poor rural households is not so much one of proletarianisation as survival. The continued commitment of male household members to agricultural identities tends to mask the increasing difficulty with which some households reproduce themselves under the economic pressures of adjustment, even with recourse to non-farm activities.

### *Migration Patterns and Non-Farm Options*

The impact of changing economic opportunities on migration patterns has tended to constrict rather than open up non-farm opportunities. The major influences have been the contraction of urban non-farm options and the increase in in-migrants from southern Nigeria, attracted by the small number of lucrative opportunities remaining in the village. While these movements are the most economically significant in terms of opportunities for accumulation, they account for only a tiny proportion of the village population. The major migratory trend observed in Nasarawan Doya continues to revolve around the traditional patterns of circulatory migration of Koranic students and agricultural labourers, though there appear to be fewer migrants from more distant locations, such as Sokoto, Borno and Niger Republic.

With regard to in-migrants, 30 per cent of households in the household sample reported having migrants living with them, and the majority of these migrants were Koranic students. As indicated in the enterprise sample, there is also a small category of in-migrants who practise itinerant non-farm activities during the dry season. 42 per cent of households reported having migrants working for them, all of whom were agricultural wage labourers, largely from the area of Kaduna, Kano and Jigawa States. Predictably, the upper stratum of households had the

highest percentage of migrants working for them. Both types of in-migrants are predominantly temporary; they come on an annual basis for 3 to 4 months.

Patterns of out-migration show a slightly different picture. 25 per cent of households in the sub-sample had out-migrants, the majority of whom were junior males. 70 per cent of out-migration was temporary, while 30 per cent was permanent. One third of the out-migrants were Koranic students, one-third were traders, and one-fifth were civil servants, though the latter were all from upper-stratum households. 75 per cent of the out-migration was initiated since the onset of adjustment, including that of civil servants, which is likely a reflection of new local opportunities for public employment generated by the creation of Makarfi Local Government in 1991.

The only other significant change in local migration patterns involved a trend toward return migration from the urban back to the rural areas. 25 per cent of households in the sub-sample reported having return migrants, and all but one of the returns occurred since the onset of structural adjustment. However, this process does not appear to be bringing skills and capital back into the community. On the contrary, return migration has involved a retreat from collapsed opportunities outside. More than half of the returnees were returning Koranic students, and 30 per cent were traders who had run out of capital. 85 per cent of the returnees had no formal education, and over 60 per cent have taken up no activity other than farming since their return. The better educated and skilled migrants, concentrated overwhelmingly in the upper stratum of households, have tended to remain outside the village. It is also worth noting that the number of return migrants since 1986 equals the number of outmigrants over the same period, which would tend to support macro-economic evidence that, under adjustment, there is no net trend toward return migration in Nigeria (Dike 1994).

What emerges from this investigation of household livelihood strategies is that non-farm activities have come to play a major role in terms of household income as well as household labour time. Despite their surprising economic importance, even during the growing season, non-farm activities remain complementary with agriculture, and have tended to reinforce rather than undermine both agricultural activity and male agricultural identities.

There are, however, important signs of strain within the non-farm sector. The non-farm incomes of women and lower-stratum households appear to be under increasing pressure in the face of rising production costs, declining access to capital, and weakening effective demand, confirming similar findings in the enterprise sample. Moreover, the contraction of the urban economy has tended to reduce inflows of capital to village households, without bringing any significant return flow of skills. The only skilled in-migration involves migrants from southern Nigeria, who, for the most part, come without their families and redirect investment to their home areas. While better-off households have been able to use their superior resource position to seize new opportunities and maximise household incomes through a combination of agricultural and non-farm activities, the majority of local households have succumbed to coping strategies in which the combination of agricultural and non-farm activities are dictated by

economic pressures beyond their control. Within this context, the ability of the non-farm sector to support what remains an agriculturally-based material and moral economy is at best questionable. If anything, efforts to promote the economic potential of the non-farm sector must be prefaced on policies and programmes which improve the economic viability of local agriculture.

### **Household Welfare and Social Networks: A Non-Farm Perspective**

An assessment of the impact of non-farm activities on household welfare requires more than a simple assessment of their importance as a source of additional household income. Just as the role of non-farm activities in rural development is mediated through their relationship with agriculture, so their implications for household welfare are mediated through the structure of economic relations within the household, as well as relations between households. In the context of structural adjustment, the traditional division of economic responsibilities between men and women has come under increasing pressure, which has limited, and in some cases undermined, the potentially beneficial role of non-farm activities on household welfare, particularly among poor households. Women's non-farm incomes have been particularly affected by these pressures. In the face of intensifying economic pressures on rural households, women's economic responsibilities within the household have tended to increase, despite evidence of declining real incomes in women's activities.

Economic pressures on individual incomes and household welfare have tended to highlight the importance of ties of mutual assistance linking households and their members to wider networks based on kinship or community. In the rural areas, however, such networks have often been enfeebled, rather than strengthened, by the pressures of adjustment, severely limiting their capacity to render assistance. In some cases, assistance through social networks may galvanise the economic efforts of household members into a predominantly household-centred economic strategy. In other cases, particularly where the household head is unable, even with the external assistance available to him, to meet the maintenance and capital needs of household members, external networks may become the focus of alternative economic strategies which draw the resources of household members away from the household.

### ***Household Welfare and Responsibilities for Household Provisioning***

Despite the major contribution of non-farm activities to the incomes of upper as well as lower-stratum households, the majority of households in Nasarawan Doya appeared to be under considerable economic pressure. There was evidence of a substantial reduction in access to a range of basic household goods, including food and clothing. Over half of the households in the sub-sample reported cutting back, relative to the early 1990s, on local 'luxuries', such as tea, bread and eggs. Despite already low levels of protein in the local diet, in which the average rural household ate meat only once or twice in a month, approximately 40 per cent of households overall, and over 50 per cent of lower-stratum households, had cut back on

purchases of meat relative to the early 1990s. Only 4 per cent of households reported an increase in their consumption of meat over the same period.

These 'cutbacks' are indicative of a situation in which an increasing number of household heads were unable to meet their basic economic responsibilities for household provisioning. According to the Islamic norms that govern allocation of household responsibilities among the Muslim Hausa, the provisioning of the household is a male responsibility. This refers to all basic household necessities, including basic clothing, fuel and items required for the preparation of household meals, right down to the money for grinding the staple grain and the matches for lighting the cooking fire. Women's incomes are reserved for 'personal' use, meaning expenditure on their own relatives, gifts for ceremonies, and extra expenditures for themselves and their children.

In the face of mounting economic pressure, and in direct contravention of local Islamic norms, there has been a tendency for men to transfer a growing share of the burden of household maintenance onto their wives. 39 per cent of wives indicated that they were often responsible for the purchase of various ingredients for household meals, such as salt, oil, and seasonings, as well as the cost of grinding grain and the purchase of kerosene for cooking or lighting. 46 per cent indicated increased economic responsibility for the purchase of children's clothing, 54 per cent for the purchase of their own basic clothing, and 86 per cent of women indicated they had been left with growing responsibility for the purchase of laundry soap and basic toiletries. Traditionally, women have granted such assistance to their husbands in the form of short-term credit (Watts 1983). In the face of the skyrocketing cost of living, however, some women in Nasarawan Doya maintained that there was little point in granting credit for household necessities, since husbands were unable to repay it. Contributions made by women to the running of the household were increasingly, implicitly or explicitly, regarded as gifts.

These trends are neither isolated nor recent. Research conducted in the late 1980s and early 1990s in nearby Hausa villages and in traditional quarters of urban areas found these tendencies already developing (Meagher & Yunusa 1996; Imam 1993). Within the framework of Islamic ideology, however, the increased economic responsibility of women for household provisioning continues to be portrayed only as a form of 'help' or 'pitching in', casting as voluntary and intermittent something that is increasingly becoming the norm.

While the additional economic burdens borne by women sound comparatively minor, their weight must be evaluated in the context of the comparatively restricted opportunities for income-generation among secluded rural women, and the predominantly low level of their capital base and incomes. The average weekly profit of women in the household sub-sample was N 47 (US\$ 0.56), at a time when a 0.75l bottle of groundnut oil cost N 60, and a bar of cheap laundry soap was over N 20. As households have become more dependent on the resources of women's non-farm activities, the necessity of contributing resources to the task of basic household maintenance had begun to weaken the viability of these activities. 63 per cent of wives indicated that their non-farm capital was being eroded by the need to help their

husbands with basic household provisioning.

Increased household demands on women's resources, combined with the low level of women's non-farm incomes and the narrow range of acceptable income-generating activities, has tended to undermine the viability, not only of the activities of individual women, but of women's non-farm activities in general. As one woman noted, women had less capital and markets were weaker, but one had to do something to bring in money, even engaging in activities with extremely low returns. In interviews, women maintained that, while economic pressures drove them to look for more non-farm activities to do, lack of capital had created a situation in which they engaged in fewer activities than they used to. Thus, the majority of women found themselves in a situation in which economic pressures within the household both encouraged them to pursue non-farm activities and limited their ability to do so.

### *Sources of Women's Non-Farm Capital*

The evidence presented above points to a significant erosion and realignment of women's traditional sources of capital. Traditionally, capital for women's non-farm activities is provided by their husbands, though women could bring into marriage income-generating assets provided by their parents. In addition, women often invested accumulated resources in small stock, particularly goats and sheep, which were kept as a form of saving, and sold to meet expenses, such as additional capital requirements for their non-farm activities, or credit requests from household members (Simmons 1990; Watts 1983). Gifts received in the context of festivals and ceremonies were also important sources of resources, but traditionally functioned as only one of a range of alternative sources.

In the context of adjustment, many of these sources of capital are drying up. Husbands are increasingly unable to meet basic household needs, let alone their obligations for the provision of capital for their wives' income-generating activities. At the same time, rearing livestock appears to have become increasingly impracticable for women as a savings strategy. The rising cost of small stock relative to women's incomes, combined with the rising cost of medicine in the event of illness, and declining access to household labour to provide feed, have all made small stock increasingly unaffordable as well as risky. In Nasarawan Doya, women's livestock holdings were found to be extremely low, averaging 1.2 small stock among upper-stratum women, and 1.5 among lower-stratum women. Income from sales of small stock constituted an extremely negligible proportion of women's incomes, and was almost never cited as an important source of capital or of household credit. Although livestock have become significantly less important as a source of capital, it was noted that lower-stratum women earned nearly twice the income of upper-stratum women from the sale of small stock, testifying to the more intense economic pressures on lower-stratum women. As mentioned above, higher incomes earned from the sale of small stock accounted for a significant proportion of the differential between the incomes of upper-stratum and lower-stratum women.

The result of the narrowing of women's sources of capital has been an increasing

concentration of women's dependence on assistance from relatives. In the household sample as well as the enterprise sample, 'gifts from relatives' was cited by women as the main source of capital for non-farm activities. Although the data presented above on the relative contributions of various sources to household income (Table 6.4) indicates that the contribution of gifts is negligible, the data tends to mask the importance of gifts in women's (as opposed to household) incomes for a number of reasons. First of all, gifts are the only income source which does not involve any production costs (unless one were to take into account the costs of maintaining social relations with those who contribute gifts), with the result that they appear less significant when included alongside gross income categories. Secondly, the category of gifts as a proportion of income only included cash gifts, while a significant proportion of gifts, especially to upper-stratum women, were received in kind, particularly in the form of grain and cloth.<sup>5</sup> Finally, the household data obscures differences in the importance of gifts in women's relative to men's incomes, since women contributed only a small share of total household income, but received the bulk of the gift income.

When the data on gifts is disaggregated, it can be seen that women's income from gifts was higher than that of men both in absolute terms and as a proportion of their total income. If grain as well as cash is taken into account, women received an average of N465 in gifts, while men received an average of N310. Given the wide discrepancy in male and female incomes, gifts were clearly much more significant as a share of female incomes. Efforts made to obtain data on non-farm *profit* levels, rather than turnover, showed that gifts of cash and grain alone accounted for over 15 per cent of women's net cash incomes, while the share of gifts in men's net cash incomes was on the order of 2 per cent.

Not only did gifts account for an important share of women's net incomes, they played a critical role in non-farm capital. Over 60 per cent of wives of household heads indicated that the major use of financial assistance from relatives, which was indicated to come largely in the form of gifts rather than credit, was non-farm capital. The next most important use was clothing, an option selected by only 20 per cent of upper-stratum women, but 45 per cent of lower-stratum women, reflecting in part the greater tendency for upper-stratum women to receive gifts of clothing in kind, while the relatives of lower-stratum women were less able to afford such bulk expenditures. These patterns reflect both a narrowing of women's access to capital and economic assistance, and a concomitant shift in economic strategies, particularly notable among lower-stratum women, from husbands and household-centred strategies, to a

---

<sup>5</sup> Valuing gifts received in kind proved excessively time-consuming, given the broader aims of the research. Gifts were usually specified in generic terms, ie. cloth or wrappers, which may vary in value from N900 to over N5000 depending on the type of cloth. Assessing the value in each case would have entailed additional questions on the type or brand of cloth, which is complicated by social status implications and, for whatever reason, was often met with claims of being unable to recall.

greater reliance on networks of natal kin.

### ***Women's Investment Priorities***

Among women, whose identities and activity patterns are much less directly bound up with agriculture, investment patterns of non-farm incomes were found to be very different from those of men. As in the case of men, however, women's priorities for the investment of non-farm income reflected a concern for maintaining and expanding the source of non-farm capital, as well as for meeting basic needs. Agriculture played a negligible role in this process, given the constraints on women's own account farming, and the declining ability of husbands to provide women with non-farm capital. As noted above, gifts, rather than crop sales, were found to constitute the main source of non-farm capital, in some cases from husbands, but more commonly from male natal kin. It is well to keep in mind that the ultimate source of such gifts is undoubtedly closely bound up with crop sales of male relatives or produce given in kind, once again underlining the ultimate dependence of even women's non-farm activities on agriculture.

This preamble represents an attempt to situate the economic logic of women's non-farm expenditure patterns. While men devoted the bulk of their non-farm earnings to household maintenance and agriculture, the two most important areas of expenditure for women's non-farm incomes were ceremony gifts and the purchase and accumulation of dowry goods for the eventual marriage of their daughters. Averaged across the three agricultural seasons, just under 50 per cent of women identified ceremonies as a major use of non-farm profits, followed by dowry goods, which were a priority for an average of 20 per cent of women. Household goods and expenditure on children came third in the order of investment priorities, and re-investment in non-farm activities was barely mentioned at all. What initially appears to be frivolous or economically irrational consumption expenditure takes on a certain economic sense when viewed in the light of the social mechanisms through which women gain access to capital as well as maintaining access to structures of economic security in times of trouble.

As indicated above, gifts from relatives, predominantly male natal kin described as 'brothers', represented the major source of non-farm capital for a majority of women in the study, as well as constituting an important source of assistance for meeting basic consumption needs. And exchange of gifts between relatives is done largely in the context of ceremonies. Thus, expenditure on ceremony attendance and ceremony gifts represents a means of reinforcing social relations with natal kin, and the economic claims embedded in those social relations. Similar strategies of maintaining economic claims on male natal kin were earlier referred to with regard to land inheritance among rural Hausa women in Kano State (Ross 1987). Expenditure on dowry goods relates to the constitution of a capital base for daughters to take with them into marriage, and hence has implications for the income-generating options of the next generation of women. This is not to pretend that the economic decisions of Hausa women are determined wholly by rational calculation, or that cultural considerations related to



obligations, status and custom do not heavily influence women's expenditure decisions. It is simply to point out that women's expenditure choices, however culturally determined, are not economically irrational, and tend to reinforce, rather than to dissipate, women's access to resources for investment in non-farm activities.

### *Social Networks and Community Associations*

The preceding discussion of women's reliance on social and economic ties with natal kin illustrates one of the ways in which the pressures of structural adjustment on household welfare have tended to increase the importance of inter-household networks and associations. Various studies have highlighted the importance of social networks and community groups in coping with the economic pressures of adjustment (Berry 1993b; Bratton 1989; Meagher and Mustapha 1997; Jamal & Weeks 1993). In Nasarawan Doya, the 1990s have witnessed an increase in the number of community-based associations, which play some role in infrastructural maintenance and economic assistance to members. This final section of the study will consider the extent to which social networks and community associations are capable of providing support for the non-farm sector in the face of economic hardship and state withdrawal from the economy.

At the time of the study, Nasarawan Doya boasted five community-based organisations, which included the village community development organisation, known as NADA, an Islamic association responsible for the maintenance of the village mosque and order during prayers, a vigilante group, a youth association and a football club. In addition, there were still vestiges of an agricultural cooperative which had collapsed with the withdrawal of state support and the escalation of fertiliser prices. With the exception of the Islamic association, all of the surviving community associations had started since the mid-1980s, and three of them were already suffering from declining membership and lack of resources owing to non-payment of dues. A fourth, the vigilante group, had been doing well, owing in part to special contributions from the village elite, but was rendered obsolete by the establishment of a police post in 1997. Only the community development association claimed to be enjoying full support, and felt it was able to fund and carry out its activities, which largely involved the maintenance through direct labour of the village road and repair of the borehole.

While most of these associations were oriented to the fulfilment of infrastructural or entertainment needs, all had subsidiary social welfare functions, providing financial assistance to paying members in times of births, marriages, deaths or other times of need. On average, upper-stratum households were found to be over-represented in these community organisations in terms of membership and financial contributions. Average contributions of upper-stratum household heads amounted to more than three times that of their lower-stratum counterparts. As the secretary of one of the organisations noted, members who paid more received more attention from the organisation in times of need. This represents yet another way in which upper-stratum households were able to lighten economic pressures and maximise control of

their expenditure.

None of these community organisations appeared to have provided financial assistance for productive expenditure, nor did they have the resource base to consider taking on such a task. The comparative absence of economic or occupationally based organisations was noted. No household heads were found to participate in rotating credit groups, which are not a traditional part of Hausa economic organisation, and only a few traditional occupational associations existed in the village, predominantly oriented toward semi-caste-based occupations such as barbers and butchers. There was undoubtedly some participation in traders' associations by resident long-distance grain, kola or livestock traders, but these were not turned up in the sample. In fact, across the various samples, the only organisations uncovered that were oriented toward the promotion of productive, particularly non-farm, activities were the home-town associations of the Igbo migrants to the village, which met in neighbouring rural towns.

Women did not participate in these public community organisations, and no village-level women's group existed. Aside from kinship networks, the only form of social networks in which local women participated were women's friendship networks, which represented an important source of assistance involving joint ceremonial expenditure and reciprocal gift-giving; and women's rotating credit groups, which were noted more for their collapse than for their persistence. Participation in friendship networks was slightly weighted toward upper-stratum women, as was the negligible level of participation in rotating credit groups. While only two women in the household sub-sample participated in rotating credit groups, 18, representing over 25 per cent of the sample, reported having left rotating credit groups since the early 1990s, owing to a lack of funds for the payment of contributions or owing to the collapse of the entire group. Some women maintained that their non-farm incomes were too small to support participation in rotating credit groups. This corroborates the findings mentioned earlier regarding the trend toward the collapse of women's rotating credit groups under the pressures of structural adjustment.

In general, structural adjustment has done more to limit rather than to promote participation in and the economic effectiveness of social networks and community-based associations. In the face of rising transport costs and declining real incomes, a majority of both household heads and wives indicated that they had cut back on contact with urban relatives. Demands for assistance had become concentrated on rural relatives, who were often little better off than those seeking financial help. Over one third of household heads and wives also indicated that high costs of transport and gifts had forced them to cut back on visits to rural relatives as well. Over 40 per cent of wives claimed to have cut back on ceremony attendance generally, and over 70 per cent said they had cut back on the level of gifts provided. Although women had become increasingly dependent on assistance from relatives, three-quarters of wives indicated that they had been forced to cut back on the level of assistance they provided to their relatives. Despite the economic importance of ceremony attendance, women found their incomes unable to meet up with the rising cost of ceremonial gifts, complicated by increasing competition from

economic needs within the household. Many resorted to pooling money to buy a single gift, or just gave cash, which accounts for the higher level of cash received as gifts among lower-stratum women.

Overall, lower-stratum households appeared less able to maintain their participation in social networks, while being the most in need of their assistance. Thus, the increasing economic importance of social networks has tended to reinforce rather than to moderate economic differentiation in Nasarawan Doya. Moreover, rural social networks and community organisations have shown little capacity to compensate for declining transfers of physical resources from the state, particularly among poorer households.

## **Conclusion**

The task of concluding a study of this nature involves shifting the analysis from a consideration of current trends in a single village to an assessment of their wider future implications. Such an assessment is necessarily contextual and necessarily limited by the partial nature of a small in-depth study. But the trends observed even in small studies are indicative of wider regional, national, and even global processes. At best, they can provide pointers to more general socio-economic and political prospects and their implications for regional and national policy, and at the least, can serve to challenge conventional assumptions concerning the prevailing trends and processes involved. In order to accomplish the analytical re-orientation required, this concluding section will proceed from a summary of the major trends observed in the study, to an indication of their relation to longer term trends in the non-farm sector of the Nigerian savanna, followed by an assessment of the future economic and policy implications of these trends for the development of the northern Nigerian non-farm sector and the rural economy in which it is located.

### ***Current Trends in the Role of the Non-Farm Sector***

Among the most basic lessons of this study is that, in the context of northern Nigeria, the pressures contributing to the expansion of the non-farm sector are linked to the need for capital, rather than to shortages of land or labour. While there is evidence of the closing of the land frontier, and some development of land shortage among junior males, land distribution at the household level was not found to be strongly associated with levels of agricultural income or with recourse to non-farm sources of income. In the case of labour, the impact of land shortage on the economic strategies of junior males, and the economic pressures of structural adjustment on local farmers and rural migrants, appears to have overcome the traditional labour constraint once characteristic of northern Nigerian agriculture, such that, in the 1990s, access to labour was not perceived to be a major problem. The critical factor underlying the apparent expansion of the non-farm sector in the Nigerian savanna relates to developments in the terms of trade in grain-based agriculture, particularly to the capital constraint created by rising production costs and cost of living inflation in the face of unstable and increasingly inadequate increases in the

price of relevant cash crops.

A snapshot of current trends in individual as well as household livelihood strategies suggests an expansion in the significance of non-farm activities under these conditions. In Nasarawan Doya, non-farm activities were found to account for 60 per cent of household incomes in cash and kind, and an average of 36 per cent of men's and women's working hours in the course of the agricultural year, with comparatively little variation between socio-economic strata. Perhaps more significantly, non-farm activities were found to account for over one-half of men's annual incomes, and nearly a third of male incomes during the wet season, the main season of agricultural activity. While this appears, at first glance, to suggest that non-farm activities may have begun to compete with agriculture for resources and labour time, evidence on investment flows between the agricultural and non-farm sectors suggests the opposite. The unexpected observation that the season with the lowest level of agricultural activity also had the lowest level of non-farm activity highlighted the high level of dependence of non-farm activities, for their inputs, their investible capital, and their markets, on the activities and economic cycle of agriculture.

In terms of resource use, the non-farm sector remains essentially complementary with agriculture, such that households with buoyant agricultural incomes tend to be those who have benefited most from developments in the non-farm sector, and vice-versa. Households that were agriculturally better-off were better able to seize new opportunities and overcome the inflationary pressures of adjustment both in agriculture and in the non-farm sector. By contrast, households suffering from inadequate levels of agricultural production lacked the resources to make timely shifts in or out of non-farm activities in the face of changing economic conditions, and found themselves increasingly concentrated in low capital, low return activities. Conversely, non-farm activities were used by those with inadequate agricultural resources, particularly youth, to generate resources for the purchase of land and agricultural inputs, although investment of non-farm incomes in agriculture was increasingly eroded by the pressures of household maintenance and rising input costs.

On the whole, agricultural and non-agricultural activities appeared to play a complementary rather than a competitive role in income-generating strategies. By the same token, however, insufficient agricultural income tended to be accompanied by inadequate non-farm incomes, and vice versa. In general, many of the same constraints that account for inadequate agricultural incomes among poor households -- lack of capital, lack of skills, inadequate control of household labour -- also undermine their ability to take advantage of non-farm opportunities. It is only by overcoming the former that individuals as well as households have been able to benefit from the latter. These findings support the contention of the literature on agricultural growth linkages that agricultural growth is essential to any productive expansion of the non-farm sector (Haggblade *et al* 1989; Delgado *et al.* 1994; Reardon *et al.* 1992). They also support the argument that, in the context of rural Africa, non-farm activities tend to aggravate rural inequality, since it is better-off rather than poorer households who tend to benefit from

opportunities for diversification (Haggblade *et al.* 1989; Reardon 1997; Saith 1992; Dercon & Krishnan 1996).

The one dimension of the non-farm sector that appeared to display a tendency to dampen the differentiating impact of non-farm earnings, namely women's non-farm incomes, may find its positive impact on rural income inequality undermined by a context of rising costs and weakening effective demand in women's activities, combined with an increasing tendency among male household heads to shift additional burdens of household reproduction onto women. While encouraging increased recourse to economic assistance through social networks, the differentiating pressures of adjustment have also tended to undermine the capacity of poor households to maintain access to such networks.

### ***Long-Term Trends***

A question yet to be answered is what the data reveal regarding long-term trends in the role of non-farm incomes. The concern with long-term trends seeks to understand changes in the importance of non-farm incomes, not just since the beginning of structural adjustment, but across a number of periods of economic change. The analysis presented here is necessarily tentative, owing to the complexity of the data, and the wide variations in the way in which it has been collected in different studies. The analysis is, however, consistent with evidence on other aspects of the rural economy, and raises issues which require serious consideration.

Hard data on non-farm income shares in rural northern Nigeria exists from the mid-1970s. Meagher & Mustapha's (1997) study of non-farm activities in northern Nigeria compiled data on non-farm income shares of household *cash* incomes from various studies conducted since 1974 in the village of Rogo, a village about 35 km from Nasarawan Doya, with an essentially similar economy. The data are reproduced in Table 8.1. Before comparing this data to the 1996/7 data from Nasarawan Doya (Table 6.4), it is vital to point out that none of the Rogo data included women's incomes, which, in Nasarawan Doya, were found to account for 16 per cent of household cash incomes, and 78 per cent of which involved non-farm incomes.

**Table 17: Share of Non-Farm Activities in Total Cash Income in Rogo Village, Nigeria, 1974/5 - 1989/90 (%)**

	1974-5*	1989-90**	1992-2***
Small-scale	53.2	60.4	67.0
Medium-scale	49.0	67.7	57.4
Large-scale	84.4	58.3	46.6
Average	55.7	59.7	53.0

Source: Meagher & Mustapha 1997.

\* Matlon (1977). Small-scale farmers represent the first two quintiles of

Matlon's sample, Medium-scale the third and fourth quintiles, and large-scale the fifth quintile. Data does not include women's incomes.

\*\* Meagher (1991). Data do not include women's income, or incomes from livestock or gifts.

\*\*\* Meagher & Ogunwale 1994. Data do not include women's incomes or incomes from livestock or gifts.

If the non-farm contribution of women's incomes is removed from the data on Nasarawan Doya, in which non-farm incomes were found to constitute 71.6 per cent of total household cash incomes, we are left with non-farm shares of about 59 per cent of household cash incomes. This suggests an upward trend in the share of non-farm incomes relative to Rogo in the early 1990s, but is roughly the same as the level found at the end of the 1980s. Abstracted from the contribution of women's incomes (which have already been shown to play a crucial role in variations in non-farm income shares), the share of non-farm incomes in household cash incomes appears to have fluctuated around 50-60 per cent since the mid-1970s. Between the mid-1970s and the late 1980s, when agricultural terms of trade were falling, the share of men's non-farm incomes rose, and between the late 1980s and the early 1990s, when policy attempted to shift terms of trade in favour of agriculture, the share of (men's) non-farm incomes fell. By the late 1990s, as terms of trade have shifted increasingly against grain-based agriculture, the share of non-farm incomes has risen again.

However, the more critical trends with regard to indications of structural change are not revealed in village-level averages (much less those that ignore the role of women's incomes), but in the trends of the different strata of village households. The Rogo data indicate a clear upward trend since the mid-1970s in the share of non-farm incomes among small-scale farmers, and a downward trend among large-scale farmers, trends that would have been slightly accentuated rather than moderated by the inclusion of women's incomes, given their heavily non-farm composition and moderating impact on income inequality (Matlon 1978). The incomes of medium-scale farmers appear to have fluctuated around a rising trend.

The data from Nasarawan Doya suggests a reversal of these trends for both lower and upper-stratum households. Net of women's contribution, non-farm incomes of lower-stratum households in Nasarawan Doya are found to constitute 60 per cent of total household income, significantly lower than the 67 per cent share recorded in 1992/3 for Rogo. The non-farm cash income share of upper-stratum households (excluding women's incomes) also came to 60 per cent, substantially higher than the 47 per cent share recorded in Rogo in 1992/3.

Thus, lower-stratum households, whose low resource position has tended to trap them on the wrong side of the agricultural terms of trade since the 1970s, regardless of improvements at the regional level, experienced a consistently rising dependence on non-farm incomes between the mid-1970s and the early 1990s. However, the data for Nasarawan Doya indicates that, by the end of the 1990s, in the face of a sharp decline in terms of trade for grain-based agriculture,

the share of non-farm incomes for lower-stratum households has fallen.

Conversely, upper-stratum households, with their superior access to inputs and lucrative markets, were able to benefit from the expanding market and improved technical conditions for grain production from the mid-1970s, and from the mid-1980s, from rising grain prices resulting from structural adjustment policies and bans on imported grain. The positive agricultural conditions enjoyed by upper-stratum households were reflected in a decline in the share of non-farm incomes in total income. Once again, the data from Nasarawan Doya shows a reversal of this trend from the early 1990s, with non-farm income shares of upper-stratum households rising in the face of strangled access to fertiliser, the collapse of cross-border grain markets, and the removal of grain import bans.

Disaggregated by socio-economic stratum, the figures on non-farm incomes shares suggest, not a fluctuation within a fairly stable range of 50-60 per cent, depending on fluctuations in agricultural terms of trade, but a decisive change since the early 1990s in the role of the non-farm sector in the rural economy. It could be argued that the change is due to the fact that the earlier data are all from the village of Rogo, and the final set are from Nasarawan Doya. However, the strong socio-economic similarities of the two villages, combined with the clear correspondence of overall trends in non-farm income shares with changes in agricultural terms of trade, would tend to militate against such an explanation.

The implications of the decisive change observed in non-farm income shares are that, since the early 1990s, upper-stratum households have begun to experience a decline in the profitability of grain-based agriculture, and have turned to increased involvement in non-farm activities. Lower-stratum households, already heavily dependent on the non-farm sector, are finding themselves increasingly marginalised within this sector by rising input and equipment costs, weakening effective demand, and increased competition for markets from better-endowed upper-stratum households, as well as from migrants from other parts of Nigeria.

The incorporation of women's incomes further accentuates this picture. Found to moderate household income inequality in the 1970s, women's incomes appear to have come under increasing pressure by the late 1990s. Although non-farm incomes of lower-stratum women were still found to contribute more, both proportionately and absolutely, to household income than incomes of upper-stratum women, women's incomes were found to be under increasing pressure owing to lack of capital, increasing economic pressures within the household, and declining effective demand. Moreover, the incomes of lower-stratum women were more severely affected than those of upper-stratum women. Nor does the development of new income-generating opportunities under structural adjustment seem set to change these patterns. New opportunities in the non-farm sector have tended on the whole to be men's opportunities, and the few lucrative possibilities available to women were found to require levels of capital which made them inaccessible to lower-stratum households. This suggests that the moderating effect of women's non-farm incomes on rural income inequality is likely to decrease, accentuating the trends toward rural differentiation and stagnating non-farm incomes

among lower-stratum households.

Although this constitutes a very localised and tentative analysis of the long term data, it raises issues which require serious consideration in light of increasingly optimistic claims regarding the economic potential of the non-farm sector. The fact that this interpretation of the data is backed by the qualitative historical evidence underlines its claim to serious consideration. At the very least, the long-term processes observed suggest less a process of deagrarianisation than a tendency toward shifts in an out of agriculture depending on the nature of agricultural policy trends and terms of trade. Where policy, as well as the economic conjuncture, is favourable to local agriculture, there is an overall shift in rural activity patterns in favour of agriculture, and where policy and sectoral terms of trade are unfavourable, there is a shift in favour of migration or non-farm sources of income. Within this broader trend, however, both the qualitative historical evidence and the hard data indicate that the shifting of livelihood strategies toward and away from agricultural incomes is taking place largely within the upper stratum of farming households, who have the resources to make timely and profitable changes.

By contrast, the lower stratum of peasant households have found the terms of trade generated by agricultural and economic policy consistently unfavourable to local, resource-poor, agricultural production since the early colonial period, and have been increasingly forced to turn to a range of non-agricultural income sources by default. In their case, deagrarianisation is taking place in the most negative sense of the term: a movement away from agricultural sources of livelihood, without any expanding process of industrialisation or capitalist farming to absorb their labour, and without the resources or skills to create viable small-scale alternatives of their own. The fragile livelihoods that result appear increasingly unsustainable, and threaten to undermine the critical market for the otherwise more viable non-farm alternatives of better-off rural households.

### ***Future Prospects for the Non-Farm Sector***

This brings us to our final question: Whither the non-farm sector? Are we faced with a process capable of taking the economic lead in rural development, or with a degenerative process based on economic desperation and unproductive survival strategies? What are the implications of developments in the non-farm sector for the future of rural diversification? for the development of agriculture? for rural accumulation and household welfare? Answers to some of these questions will be attempted through an assessment of future prospects for non-farm development in relation to four major issues: the relative roles of agriculture and non-farm activities in rural economic development, the impact of non-farm incomes on household welfare and rural inequality, the developmental prospects of new non-farm opportunities created by structural adjustment, and trends in rural-urban population movements and economic relations.

Perhaps the most central lesson of this study relates to the fundamental importance of agriculture in the development of the non-farm sector. The study has shown that the adequacy



of agricultural production to household consumption and cash needs determines the economic terms on which household members participate in the non-farm sector. The timing of non-farm participation, its impact on household agricultural performance, the capital for entering low-return or high return activities -- in short, whether non-farm activities are pursued as low-income survival strategies or as income maximisation strategies with a potential for accumulation and re-investment in agriculture -- all are heavily influenced by the agricultural base of rural households. At the sectoral level, agriculture plays a central role in the generation of non-farm opportunities, the formation of non-farm capital, and the creation of effective demand for non-farm goods and services. To suppose that the non-farm sector can provide an independent impetus for development in the context of a crisis-ridden agricultural sector and a withdrawn state, is to believe in the possibility of creating something from nothing.

In the absence of greater attention to the development of peasant agriculture, the expansion of the non-farm sector looks set to intensify, rather than alleviate, rural poverty and income inequality. In the face of increasingly negative agricultural terms of trade and declining agricultural incomes, not to mention rising costs of entry into the non-farm sector, the rural poor will find themselves increasingly concentrated in labour intensive, low-income non-farm activities, in which incomes are largely unsuccessful in keeping up with the rising cost of living, of agricultural production and of non-farm participation. The evidence presented above on long-term trends in the share of non-farm incomes suggests that even the limited welfare function that non-farm incomes have played in the past is under threat in the face of growing competition from better-endowed rural households and urban outsiders.

This brings us to the developmental prospects of the new economic opportunities created by the re-orientation of supply and demand under structural adjustment -- a process in which proponents of non-farm-led growth appear to place great store. While new opportunities have undoubtedly been created, an assessment of their economic prospects requires a consideration of the nature of those opportunities, and the types of economic actors who will be in a position to take advantage of them. Two types of new opportunities can be distinguished, those related to the provision of infrastructural and welfare services formerly provided by the state, and those derived from changes in the supply and demand for goods between rural and urban areas.

At the level of rural services, it is important to distinguish between the failure or elimination of public provision and the creation of private economic opportunities. The former relates only to a cessation of supply, while the latter requires that the gap in supply be accompanied by the existence of effective demand. The problematic experience of cost-recovery programmes in Africa, and their frequently negative impact of the use of public services, suggests that the economic opportunities created by the collapse of rural public services are likely to be limited. Add to this the context of declining real incomes, particularly in food-crop agriculture, and the prospects for private service provision appear even slimmer. In Nasarawan Doya, gaps in public service provision were more commonly met by the formation of community associations than by the emergence of private service providers, and even the low

cost of communal provision was difficult for many households to afford. Where services could not be communally organised, such as in the areas of health and water provision when the borehole broke down, private provision generally involved reversion to low-cost, labour intensive traditional options, such as water carriers and traditional medicine. Both the skills and the capital for local provision of modern services were largely absent, and even where private modern services were offered, such as in the area of health care, the level of effective demand proved too low to sustain them.

The other category of new opportunities relates to the impact of the contraction of the urban economy on the demand for rural goods and services, largely as a result of declining access to imported and urban industrial goods and services. Evidence from Nasarawan Doya suggests that the developmental potential of this type of new opportunity is also severely limited. Such economic opportunities are based on increased demand for inferior goods and local retailing in the face of a contraction of real incomes. In Nasarawan Doya, the profitability of local sugar production and local retailing of manufactured consumer goods depended on the inability of consumers to afford white sugar, or to afford the cost of travelling to where they could buy manufactured goods more cheaply. In short, the profitability of such activities is based on economic hardship, and will collapse in the event of an improvement in incomes. Moreover, given the foundation of these opportunities in weakened effective demand, the levels of profitability of these activities did not appear able to support any significant new investment or technical development. Local sugar production was dependent on second-hand obsolete machinery, and was unable to support the cost of local production of that machinery. The bakery represented an attempt to exploit abandoned facilities, not to undertake new investment. Even the local blacksmith was unable to parlay increased demand for locally produced tools and local mechanical repairs into new investment in the production of bicycle carriers for a wider market.

Evaluating the prospects of new non-farm opportunities also requires a consideration of who is best placed to take them up -- a question which requires us to confront, once again, the issue of where the capital and skills for non-farm development will come from. In Nasarawan Doya, the profitable opportunities created by adjustment were all highly capital intensive, and in some cases, skill intensive. Only better-off rural households were in a position to take advantage of them, thus intensifying rural inequality. Urban migrants from Nasarawan Doya who had capital and skills (and tended to come from better-off rural households anyway) also tended to remain in the cities even in the context of structural adjustment. It was the unskilled, the destitute and the unemployed who returned to the village, some starting up a range of low-return non-farm activities, while others just worked on the household farm. The only inflow of skills and capital came from outsiders coming in from other parts of Nigeria to take advantage of the limited range of new economic opportunities. While they brought a measure of capital and skills into the village, they also intensified competition for local markets, and tended to channel further investment out of the village.

These observations force a reassessment of prevailing models of how structural adjustment is likely to affect the direction of rural-urban movements of population and entrepreneurial investment. Hypothesised trends toward reverse migration, and a subsequent outward movement in flows of rural goods and entrepreneurial investment toward the towns and cities (Addison & Demery 1989; Pedersen 1997) involve an implicit assumption that the urban informal sector will somehow disappear from the economic equation, presumably through the process of reverse migration. The economically-squeezed urban masses are thereby transformed into a ready market for rural non-farm goods and services. This formulation has the advantage of taking care of the problem of effective demand for rural goods and services independently of the issue of agricultural incomes. However, as Jamal & Weeks (1993) have shown, the urban informal sector has tended to expand rather than contract in the face of falling urban incomes.

In fact, the reality appears to be precisely the opposite of the scenario based on reverse migration and rural small town expansion. Only those delinked from jobs or urban family ties, and unable to survive in the urban informal sector, appear to be resorting in reverse migration, leaving the urban areas full to bursting with purveyors of cheap informal goods and services. Small rural towns, only recently discovered by development theorists (Aeroe 1992; Baker & Pedersen 1992; Pedersen 1997), were discovered very early in the structural adjustment period by entrepreneurs from the urban informal sector, as well as by the small town unemployed and underpaid, and these markets too have become saturated with informal goods and services (Meagher & Yunusa 1996). Far from supplying low-cost goods and services to small towns and urban areas, the rural non-farm sector has become the final commercial frontier for would-be entrepreneurs from the towns, who find themselves unable to compete in saturated urban and small-town markets. Thus, under structural adjustment, the prevailing direction of the movement of informal sector goods and local entrepreneurial investment has been from the urban to the rural areas rather than the reverse. The current emphasis on infrastructural improvements, particularly roads linking the rural areas with small towns, is therefore more likely to promote increased competition from urban and small-town entrepreneurs than to facilitate access by local rural enterprise to urban and small town infrastructure and markets.

This perspective increases the sense of the fragility of the rural non-farm sector. In addition to inadequate skills, weak rural markets, and a weakened agricultural resource base, the non-farm sector must contend with competition from the better skilled and resourced entrepreneurs from the urban informal sector, who have already begun to scan the rural horizon for any new non-farm opportunities. These raiders of rural opportunities pose a direct threat to the more viable non-farm strategies of better-off rural households, particularly in the case of commercial and productive activities based on industrial rather than agricultural inputs.

### *Policy Reflections*

The findings of this study suggest that the non-farm sector cannot, as Saith (1992) has argued, function as a panacea for failed industrialisation drives and declining agricultural incomes. Even in the agriculturally and entrepreneurially active context of the Nigerian savanna, concerted policy attention to agriculture as well as to rural small-scale enterprise development will be required to transform the non-farm sector from a developmental placebo into a dynamic force in the rural development process. This implies a set of policy initiatives which fly in the face of the liberalising prescriptions of structural adjustment, and which prioritise agriculture as a central component of any non-farm development strategy.

It cannot be overemphasised that the development of a viable agricultural sector is fundamental to sustainable non-farm as well as national development. Agriculture remains the principal source of capital and effective demand for non-farm activities in the Nigerian savanna, as well as providing a critical economic and subsistence fall-back for rural households. Without prior improvements in the profitability and productivity of local agriculture, the non-farm sector will be unable to establish a viable economic base or sustainable markets. Northern Nigerian small-scale grain production also plays a central role in national as well as regional food security, and provides critical inputs for a range of local non-farm activities and urban industries. A country the size of Nigeria cannot afford to allow a sustained shift of rural producers out of grain production, at least until significant improvements in agricultural productivity have been achieved. The foreign exchange costs and loss of control over national food security implied in such a move would overwhelm any potential short-term gains in rural livelihood prospects.

These observations call into question approaches which focus on limiting vulnerability and insulating rural livelihoods against external shocks. In critical food production areas such as the Nigerian savanna, attempts at the insulation of rural livelihoods are not only meaningless, but may generate new shocks as local livelihood strategies feed into the national food and agro-input system. Policies to promote viable rural livelihoods must therefore focus on increasing the productivity and profitability of peasant agriculture in the food crop sector, not at withdrawal into a range of agricultural and non-agricultural survival strategies.

In the context of the Nigerian savanna, key policy measures to promote agriculture would include the reimposition of controls on grain imports, the maintenance of some measure of subsidy on fertiliser and pesticides, and concerted improvements in the distribution of fertiliser, both subsidised and unsubsidised. Greater liberalisation may be needed in the organisation of fertiliser distribution, although this would have to be carefully coordinated if any measure of subsidy is to be maintained.

In Nigeria, these policy concerns have been overtaken by events, and then some. In 1997, shortly before the conclusion of the fieldwork on which this study is based, the distribution of fertiliser was fully liberalised and the subsidy completely removed -- measures which greatly increased the availability of fertiliser (though not always of the required type and quality), but

failed to reduce the cost sufficiently to significantly improve access on the part of small farmers. This represented one of the last in a series of liberalising measures which, between 1992 and 1998, removed all of the key illiberal components of Nigeria's original Structural Adjustment Programme, including the import bans on grain, and the subsidies on fertiliser and petrol.

However, this 'proper' liberalisation programme has been followed, since the death of Abacha, by a total reversal in the agricultural policy direction. In January 1999, bans were re-imposed on the importation of wheat flour, maize, sorghum and millet with a view to boosting local agricultural production (IRIN no.2 1.5.99). In the course of the 1999 planting season, a moderate 25 per cent subsidy was reimposed on a limited quantity of fertiliser, and the question of fertiliser pricing and distribution has been reopened.

It is, as yet, too early to assess the impact of these measures on local agriculture, or on non-farm development, but they offer at least some potential for easing the crippling trends in agricultural terms of trade which have tended to undermine the viability of both agriculture and the non-farm sector in northern Nigeria. This change in policy direction represents a recognition on the part of the newly elected Obasanjo regime that, although the fiscal implications of a more interventionist agricultural strategy are considerable, they are not, in the long run, as considerable as the costs of allowing the bulk of rural farming households to be further marginalised by agricultural policy. Unfortunately, poorer farming households may still find themselves unable to meet the minimum costs of benefiting from any improvements brought by these policy changes. In such cases, poverty alleviation measures may be called for, including labour-intensive public works programmes, which could be targeted at rural infrastructural improvement (Bryceson & Howe 1996).

Although policy measures to improve agricultural terms of trade are a necessary condition for productive expansion of the non-farm sector, they are by no means sufficient conditions. While increased agricultural incomes may help to generate capital for limited non-farm investment and buoy up rural effective demand, the underdevelopment of skills and rural infrastructure, and the lack of access to appropriate technology, technical services and adequate levels of finance will continue to constitute a serious impediment to the development of the non-farm sector. As mentioned above, a concentration on the provision of infrastructure without attention to the development of local technical and entrepreneurial skills as well as access to adequate finance is likely to facilitate the invasion of the non-farm sector by outside entrepreneurs with better access to skills and capital, with predictably negative implications for re-investment of non-farm earnings in local agriculture.

Organisations for the development and provision of improved rural technologies, as well as the provision of loans, training and back-up services already exist in Nigeria, as do agencies for the development and rehabilitation of rural infrastructure. The Family Economic Advancement Programme (FEAP), the Petroleum Trust Fund (PTF), the Agricultural Mechanisation Programme of the Institute of Agricultural Research, and numerous NGO

programmes for rural income generation and the economic empowerment of women are just some of the plethora of organisations and state agencies concerned with the provision of these rural support services. The virtual absence of their services in Nasarawan Doya is a clear indicator of their relevance to the vast majority of Nigerian rural entrepreneurs. However, the replication of these non-farm development initiatives is not likely to improve matters. What is needed are efforts to improve the effectiveness of existing programmes for the needs of non-farm development. A greater concern with the development of local technical and maintenance skills, and back-up services, rather than with the perfunctory provision of equipment for rural income generation projects, would go a long way to improving the effectiveness of the services provided. Greater attention to local variations, as well as to recent shifts, in profitable opportunities is also important. The targeting of loans of capital and equipment, and of the development of local technologies, on the basis of an assessment of the activities with the greatest local economic potential would help to maximise the effectiveness of such investments. The administrative and resource demands of greater sensitivity to local conditions and local technical needs are substantial, but often make the difference between money squandered and money well spent, and, for the moment at least, the political environment appears favourable.

Even these extensive measures will have only a very limited effect on the rural economy in the absence of more sustained improvements in the wider national economy. Saith's (1992) observation, quoted at the beginning of this study, should serve as a reminder that the rural economy is an organic part of the national economy, not an isolated enclave. Just as the non-farm sector cannot grow independently of conditions in agriculture, the rural economy cannot be revived without addressing the crisis in the urban economy. Access to capital, skills and services, as well as conditions of competition within the non-farm sector, are intimately bound up with access to resources in the urban economy, and with the economic capacity of the state. Far from bypassing the weaknesses of the wider industrial economy and the state, the non-farm sector will only be further enfeebled by their economic incapacity.

These reflections represent a significant departure from prevailing policy prescriptions for the development of the non-farm sector, which concentrate on market liberalisation and the improvement of rural infrastructure. However, the effectiveness of liberalisation depends on the prior development of the financial, technical, and demand conditions for non-farm growth, which cannot be generated by the mere fact of diversification, particularly under conditions of crisis in the agricultural economy, nor can they be wished into being by the need to replace state involvement in rural development. Following decades of neglect, it is a flight of fancy to expect the rural economy suddenly to be able to cast aside the need for state assistance and simply kickstart its own development process. It is only when the non-farm sector is given the benefit of serious policy attention and adequate external investment, rather than simply being deployed as a bargain solution to rural development problems, that a story which began as an admission of failure can end with a measure of success.

## **Epilogue**

1998 was a good year for rain in Nasarawan Doya, and mercifully, there was fertiliser. At the height of the farming season, the village appears deserted during the day. By four o'clock, the hoard of young men on motorcycles begin to gather at the village transit point to wait for passengers. The row of young girls selling snacks huddle against the front of the lock-up stalls, waiting for their market to come in from the farms.

The bakery closed a few months ago after the local landlord tried to double the rent. The branch chemist at the entrance to the village has also closed, and the young Igbo entrepreneur has returned to work in his brother's business near the local town. The private clinic never re-opened, and the nurse who owned it has now moved all of her equipment back to Zaria. Even the female community health worker, the only one in the village, was recently retrenched. She now operates private health services from her rented room in the village, but will leave the village for good in December to marry. She feels there is not a strong enough market in the village to make it worthwhile for non-indigens to stay on. Her departure will leave Nasarawan Doya, a village of over 12,600 people, with no trained female health worker -- a serious problem in a context in which Islamic norms prevent women from being attended to by males. There are local midwives to fall back on, but they are unable to handle complications, not to mention the many serious illnesses endemic to the area. The need for local health services is acute, but it takes more than need to attract the private sector.

At least sugar production is still doing well, but now there is talk of a factory for local sugar production in Jigawa State....

## References

- Addison, T. and L. Demery 1989, 'The Economics of Rural Poverty Alleviation', in S. Commander (ed.), *Structural Adjustment and Agriculture*, ODI, London, James Curry and Portsmouth, N.H., Heinemann
- Aeroe, A. 1992, 'The Role of Small Towns in Regional Development in South-East Africa', in J. Baker and P.O. Pedersen, (eds), *The Rural-Urban Interface in Africa. Expansion and Adaptation*, Seminar Proceedings No. 27, Nordiska Afrikainstitutet, Uppsala
- Andrae, G. and B. Beckman 1987, *Industry Goes Farming: The Nigerian Raw Material Crisis and the Case of Textiles and Cotton*, Scandanavian Institute of African Studies, Uppsala
- Baker, J. and P.O. Pedersen 1992, 'Introduction', in J. Barker and P.O. Pedersen (eds), *The Rural-Urban Interface in Africa. Expansion and Adaptation*, Seminar Proceedings No. 27, Nordiska Afrikainstitutet, Uppsala
- Bello, S. 1982, 'State and Economy in Kano 1894-1960: A Study of Colonial Domination', ABU, Zaria, PhD Thesis
- Baier, S. 1980, *An Economic History of Central Niger*, Oxford, Clarendon Press
- Baker, J. and P.O. Pedersen 1992, *The Rural-Urban Interface in Africa*, Nordiska Afrikainstitutet, Uppsala
- Beckman, B. 1987, 'Public Investment and Agrarian Transformation in Northern Nigeria', in M. Watts (ed.), *State, Oil and Agriculture in Nigeria*, Berkeley, California, Institute of International Studies
- Berry, S. 1993a, *No Condition is Permanent: The Social Dynamics of Agrarian Change in Sub-Saharan Africa*, University of Wisconsin Press, Madison
- \_\_\_\_\_, 1993b, 'Coping with Confusion: African Farmers' Responses to Economic Instability in the 1970s and 1980s', in T.M. Callaghy and J. Ravenhill (eds), *Hemmed In: Responses to Africa's Economic Decline*, New York, Columbia University Press
- Bratton, M. 1989, 'Beyond the State: Civil Society and Associational Life in Africa', *World Politics*, XLI, (3)
- Bryceson, D.F. 1996, 'De-agrarianization and Rural Employment in Sub-Saharan Africa: A Sectoral Perspective', *World Development*, 24, (1), 97-111
- Central Bank of Nigeria, Annual Report and Statement of Accounts (1988-1996), Lagos
- Clough, P. and G. Williams 1987, 'Decoding Berg: The World Bank in Rural Northern Nigeria', in M. Watts (ed.), *State, Oil and Agriculture in Nigeria*, Berkeley, California, Institute of International Studies
- Cohen, A. 1969, *Custom and Politics in Urban Africa. A Study of Hausa Migrants in Yoruba Towns*, London
- Delgado, C., P. Hazell, J. Hopkins and Y. Kelly 1994, 'Promoting Intersectoral Growth Linkages in Rural Africa through Agricultural Technology Policy Reform', *American Journal of Agricultural Economics*, 76, 1166-1171



- Dercon, S. and P. Krishnan 1996, 'Income Portfolios in Rural Ethiopia & Tanzania: Choices and Constraints', *Journal of Development Studies*, 32, (6), 850-875
- Dike, E. 1994, 'Economic Development, Urban Labour Absorption and the Informal Sector in Nigeria', Ahmadu Bello University, Zaria, Nigeria, mimeo
- Egg, J. and J. Igue 1993, 'Market Driven Integration in the Eastern Subregion: Nigeria's Impact on Its Neighbours', Synthesis Report, INRA/IRAM/UNB
- Ellis, F. 1997, 'Household Strategies and Rural Livelihood Diversification' Draft Research Paper, School of Development Studies, University of East Anglia
- Hill, P. 1969, 'Hidden Trade in Hausaland', *Man*, 4, 392-409
- \_\_\_\_\_, 1972, *Rural Hausa: A Village and a Setting*, Cambridge, CUP
- \_\_\_\_\_, 1977, *Population, Prosperity and Poverty: Rural Kano 1900 and 1970*, London: CUP
- Haggblade, S., Hazell, P. & Brown, J. (1989) 'Farm-Nonfarm Linkages in Rural Sub-Saharan Africa' *World Development* 17 (8) 1173-1201
- Iliya, M. and K. Swindell 1997, 'Winners and Losers: Household Fortunes in the Urban Peripheries of Northern Nigeria', in D. Bryceson and V. Jamal (eds), *Farewell to Farms: De-Agrarianization and Employment in Africa*, Ashgate
- Imam, A. 1993, "'If You Won't Do These Things For Me, I Won't Do Seclusion For You": Local and Regional Constructions of Seclusion Ideologies and Practices in Kano, Northern Nigeria', Department of Social Anthropology, University of Sussex, Unpublished D.Phil Thesis
- Jackson, C. 1985, *The Kano River Irrigation Project: Women's Roles & Gender Differences in Development: Cases for Planners*, West Hartford, Kumarian Press
- Jamal, V. and J. Weeks 1993, *Africa Misunderstood*, Basingstoke, Macmillan
- Katsina Agricultural and Rural Development Agency (KTARDA) 1988-1992, Crop and Weather Reports
- KTARDA 1989, Crop and Weather Reports, Ajiwa Zonal Office, Ajiwa
- KTARDA 1993, '1992 Report on Research/Extension Activities in Katsina State', Katsina
- Leidholm, C., M. McPherson, M. and E. Chuta 1994, 'Small Enterprise Employment Growth in Rural Africa', *American Journal of Agricultural Economics*, 76, 1177-1182
- Lennihan, L. 1987, 'Agricultural Wage Labour in Northern Nigeria', in M. Watts (ed.), *State, Oil and Agriculture in Nigeria*, Berkeley, California, Institute of International Studies
- \_\_\_\_\_, 1994, 'Structural Adjustment and Agricultural Wage Labour in Northern Nigeria: A Preliminary Research Note', Paper presented at the 37th Annual Meeting of the African Studies Association, Toronto, Canada, 3-6 November
- Longhurst, R. 1985, *Farm Level Decision Making, Social Structure and An Agricultural Development Project in a Northern Nigerian Village*, Samaru Miscellaneous Paper 106, IAR
- Lovejoy, P. 1980, *Caravans of Kola, The Hausa Kola Trade: 1700-1900*, Zaria, Ahmadu Bello University Press

- Lubeck, P. 1987, 'Islamic Protest and Oil-Based Capitalism: Agriculture, Rural Linkages, and Urban Popular Movements in Northern Nigeria', in M. Watts (ed.), *State, Oil and Agriculture in Nigeria*, Berkeley, Institute of International Studies, University of California
- Matlon, P.J. 1977, 'The Size Distribution, Structure, and Determinants of Personal Incomes Among Farmers in the North of Nigeria', Cornell University, PhD Thesis
- \_\_\_\_\_, 1978, *Income Distribution and Patterns of Expenditure, Savings, and Credit Among Farmers in the North of Nigeria*. Occasional Paper 96. Department of Agricultural Economics, Cornell University
- \_\_\_\_\_, 1979, *Income Distribution Among Farmers in Northern Nigeria: Empirical Results and Policy Implications*, African Rural Economy Paper 18, East Lansing, Michigan State University
- Meagher, K. 1991, 'Priced Out of the Market: The Effect of Market Liberalization and Parallel Trade on Smallholder Incomes in Northern Nigeria', McNamara Fellowship Report
- Meagher, K. 1995, 'Parallel Trade and Powerless Places: Research Traditions and Local Realities in Rural Northern Nigeria', *Africa Development*, XX(2), 5-19
- \_\_\_\_\_, 1997, 'Shifting the Imbalance: The Impact of Structural Adjustment on Rural-Urban Population Movements in Northern Nigeria', *Journal of Asian and African Studies*, 32, (1-2) June
- \_\_\_\_\_, forthcoming, 'Veiled Conflicts: Gender, Differentiation and Structural Adjustment in Nigerian Hausaland', in D.F. Bryceson *et al.* (eds), *Disappearing Peasantries*, London, IT Publications
- Meagher, K. and S.A. Ogunwale 1994, 'The Grain Drain: The Impact of Cross-Border Grain Trade on Agricultural Production in Northern Nigeria', Research Report for IRAM/INRA/LARES Project on the Eastern Sub-Market (Nigeria and neighbouring countries)
- Meagher, K. and M.B. Yunusa 1996, 'Passing the Buck: Structural Adjustment and the Nigerian Urban Informal Sector', UNRISD Discussion Paper 75
- Meagher, K. and A.R. Mustapha 1997, 'Not by Farming Alone: The Role of Non-Farm Incomes in Rural Hausaland', in D.F. Bryceson and V. Jamal (eds), *Farewell to Farms: De-Agrarianization and Employment in Africa*, Ashgate
- Mortimore, M. 1989, *Adapting to Drought: Farmers, Famines and Desertification in West Africa*, Cambridge, CUP
- Mustapha, A.R. 1991, 'Structural Adjustment and Multiple Modes of Social Livelihood in Nigeria', UNRISD Discussion Paper 26
- Mustapha, A.R. and K. Meagher 1992, 'Stress, Adaptation and Resilience in Rural Kano', Paper presented at the SSRC/CODESRIA Workshop on African Agriculture, Dakar, Senegal, January 18-21

- Norman, D.W. 1973, 'Economic Analysis of Agricultural Production and Labour Utilization Among the Hausa of the North of Nigeria', East Lansing, Michigan State University, African Rural Employment Paper 4
- Norman, D.W., E.B. Simmons and H.M. Hays 1982, *Farming Systems in the Nigerian Savanna*, Boulder Co., Westview Press
- Pedersen, P.O. 1997, *Small African Towns - Between Rural Networks and Urban Hierarchies*, Avebury Press.
- Reardon, T. 1997, 'Using Evidence of Household Income Diversification to Inform Study of the Rural Nonfarm Labour Market in Africa', *World Development*, 25, (5), 735-747
- Reardon, T., C. Delgado and P. Matlon 1992, 'Determinants and Effects of Income Diversification Amongst Farm Households in Burkina Faso', *Journal of Development Studies*, 28, (2), 264-296
- Ross, P. 1987, 'Land as a Right to Membership: Land Tenure Dynamics in a Peripheral Area of the Kano Close-Settled Zone', in M. Watts (ed.), *State, Oil and Agriculture in Nigeria*, IIS, University of California, Berkeley
- Saith, A. 1992, *The Rural Non-Farm Economy: Processes & Policies* ILO, Geneva
- Simmons, E.B. 1975, 'The Small-Scale Rural Food-Processing Industry in Northern Nigeria' *Food Research Institute Studies*, 14, (2), 147-161
- \_\_\_\_\_, 1990, 'Women in Rural Development in Northern Nigeria', in O. Otite and C. Okali (eds), *Readings in Nigerian Rural Society and Economy*, Ibadan, Heinemann
- Wallace, T. 1978, 'The Concept of Gandu: How Useful Is It In Understanding Labour Relations in Rural Hausa Society?', *Savanna*, 7, (2), 137-50
- Williams, G. 1988, 'Why is there No Agrarian Capitalism in Nigeria', *Journal of Historical Sociology*, 1, (4), 345-398
- Watts, M. 1983, *Silent Violence*, Berkeley, University of California Press

# ASC Working Papers

1	Laurens van der Laan	Modern inland transport and the European trading firms in colonial West Africa 1980	Dfl. 2.50
2	Klaas de Jonge	Relations paysans, pêcheurs, capitalisme, état. Une étude d'une lutte de classe en Casamance (Sud Sénégal) 1980	out of print
3	Gerti Hesseling	Etat et langue en Afrique. Esquisse d'une étude juridique comparative 1981	Dfl. 2.50
4	Els van Rouveroy van Nieuwaal-Baerends & Emile van Rouveroy van Nieuwaal	Conciliation et la qualité des relations sociales chez les Anufim du NordTogo en Afrique de l'Ouest 1981	out of print
5	Piet Konings	Peasantry and state in Ghana. The example of the Veia Irrigation Project in the Upper Region of Ghana 1981	out of print
6	C.A. Muntjewerff	The producers' price system and the coffee and cocoa trade at village level in West Africa 1982	Dfl. 2.50
7	C.A. Muntjewerff	Produce marketing cooperatives in West Africa 1982	Dfl. 2.50
8	Emile van Rouveroy van Nieuwaal & Els van Rouveroy van Nieuwaal-Baerends	La Parcelle du Gendre comploteur. Manières coutumières et modernes d'acquérir des droits sur la terre, à N'zara (Nord Togo) 1982	Dfl. 3.50
9	B. Merx	Zonder bloed geen vliegen 1985	out of print
10	Laurens van der Laan	Cameroon's main marketing board: History and scope of the ONCPB 1987	Dfl. 5.00
11	Laurens van der Laan	Cocoa and coffee buying in Cameroon: The role of the marketing board in the South-West and North-West Provinces, 1978-1987 1988	Dfl. 5.00
12	Cyprien F. Fisiy	Palm tree justice in the Bertoua Court of Appeal: The witchcraft cases 1990	Dfl. 5.00
13	Laurens van der Laan & Wim van Haaren	African marketing boards under structural adjustment: The experience of Sub-Saharan Africa during the 1980s 1990	Dfl. 5.00

14	Rob Buijtenhuijs	The revolutionary potential of African peasantries: Some tentative remarks 1991	Dfl	5.00
15	Deborah Fahy Bryceson & John Howe	Rural household transport in Africa: Reducing the burden on women? 1993	Dfl	5.00
16	Deborah Fahy Bryceson	Easing rural women's working day in Sub-Saharan Africa 1993	Dfl	5.00
17	Rob Buijtenhuijs & Elly Rijniere	Demokratisering in Afrika ten zuiden van de Sahara (1989-1992). Deel 1: Een becommentarieerd overzicht van de literatuur. Deel 2: Onderzoekscapaciteiten in Afrika en in het Westen 1993		out of print
18*	Nina Tellegen	Rural employment in Sub-Saharan Africa. A bibliography 1993		out of print
19*	Deborah Fahy Bryceson	De-agrarianization and rural employment generation in sub-Saharan Africa: Process and prospects 1993	Dfl	5.00
20*	Deborah Fahy Bryceson & Corine van der Laan	De-agrarianization and rural employment in Africa. Proceedings of the "De-agrarianization and Rural Employment" Workshop held at the Afrika-Studiecentrum, Leiden, May 1994 1994	Dfl.	5.00
21	Deborah Fahy Bryceson & Michael McCall	Lightening the load: Women's labour and appropriate rural technology in Sub-Saharan Africa 1994	Dfl.	5.00
22	Tjalling Dijkstra	Food trade and urbanization in Sub-Saharan Africa: From the early Stone Age to the structural adjustment era 1995	Dfl	5.00
23*	Patricia Paravano	Working for the future: Elite women's strategies in Brazzaville 1997	Dfl.	5.00
24*	Ronald J.A. Berkvens	Backing two horses: Interaction of agricultural and non-agricultural household activities in a Zimbabwean communal area 1997	Dfl.	5.00
25*	Mulat Demeke	Rural non-farm activities in impoverished communities: The case of North Shoa, Ethiopia 1997	Dfl.	5.00
26*	Claude G. Mung'ong'o	Coming full circle: Agriculture, non-farm activities and the resurgence of out-migration in Njombe District, Tanzania 1998	Dfl.	5.00

27*	Ndalahwa F. Madulu	Changing lifestyles in farming societies of Sukumaland: Kwimba District, Tanzania 1998	Dfl. 5.00
28*	George Jambiya	The dynamics of population, land scarcity, agriculture and non-agricultural activities: West Usambara Mountains, Lushoto District, Tanzania 1998	Dfl. 5.00
29*	Davis Mwamfupe	Changing village land, labour and livelihoods: Rungwe and Kyela Districts, Tanzania 1998	Dfl. 5.00
30	Dick Foeken & Alice Mboganie Mwangi	Farming in the City of Nairobi 1998	Dfl. 5.00
31	Wijnand Klaver & Robert Mwadime	Food consumption and nutrition in the Kenya Coast 1998	Dfl. 5.00
32*	Cecil Manona	De-agrarianisation and the urbanisation of a rural economy: Agrarian patterns in Melani Village in the Eastern Cape 1999	Dfl. 10.00
33*	Pat McAllister	Agriculture and co-operative labour in Shixini, Transkei, South Africa 1999	Dfl. 10.00
34*	Leslie Bank	No visible means of subsistence: Rural livelihoods, gender and de-agrarianisation in the Eastern Cape 1999	Dfl. 10.00
35*	Deborah Fahy Bryceson	African Rural Labour, Income Diversification and Livelihood Approaches: A Long-term Development Perspective 1999	Dfl. 10.00
36*	Ellie Rijnierse	The Politics of Survival: Towards a Global, Long-term and Reflexive Interpretation of the African Contemporary Experience 1999	Dfl. 10.00
37*	Barth Chukwuezi	De-agrarianisation and Rural Employment in Rural Igboland, South-eastern Nigeria 1999	Dfl 10.00
38*	Mohammed-Bello Yunusa	Not Farms Alone: A Study of Rural Livelihoods in the Middle Belt of Nigeria 1999	Dfl. 10.00
39*	Mohammed A. Iliya	Income Diversification in the Semi-arid Zone of Nigeria: A Study of Gigane, Sokoto, North-west Nigeria 1999	Dfl. 10.00
40*	Kate Meagher	If the Drumming Changes. the Dance Also Changes: De-agrarianisation and Rural Non-farm Employment in the Nigerian Savannah 1999	Dfl. 10.00

42\* Abdul Raufu Mustopha

Cocoa Farming and Income Diversification in South-  
western Nigeria  
1999

Dfl. 10.00

**\* These Working Papers are all publications of the DARE Research Programme**

Copies can be ordered from: African Studies Centre  
attn. Karl Dorrepaal  
P.O. Box 9555  
2300 RB Leiden  
The Netherlands

Tel: +31 71 5273490  
Fax: +31 71 5273344  
E-mail [asc@fsw.leidenuniv.nl](mailto:asc@fsw.leidenuniv.nl)

## **Books**

The following books have recently been published by the DARE Research Programme:

Bryceson, D.F. and V. Jamal (eds) 1997  
*Farewell to Farms: De-Agrarianisation and Employment in Africa*  
Aldershot: Ashgate, 265 pp., Price: £16.50

Tellegen, N. 1997  
*Rural Enterprises in Malawi: Necessity or Opportunity?*  
Aldershot: Ashgate, 249 pp., Price: £22.50

If you are interested in purchasing any of our books, place your order with:  
Ashgate Publishing Ltd,  
Gower House,  
Croft Road,  
Aldershot,  
Hampshire GU11 3HR,  
England

Fax: +44 1252 317446  
E-mail: [ashgate@cityscape.co.uk](mailto:ashgate@cityscape.co.uk)

*(Please include a £2.50 postal charge per copy on an order of less than 3 books.)*

