

DE-AGRARIANISATION AND RURAL EMPLOYMENT NETWORK

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Not Farms Alone: A Study of Rural Livelihoods in the Middle Belt of Nigeria

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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 Mohammed-Bello Yunusa 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.

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Introduction

The economic climate in Nigeria makes it imperative for individuals in urban and rural areas to seek and adopt more than one means of livelihood for subsistence. Problems of accumulated debt and the depreciation of the Naira against other international currencies, particularly the US dollar, have worsened the socio-economic problems of Nigeria. In 1995, its outstanding debt was US\$32.6 billion (about 50 per cent of its gross domestic product). This represents a 10.7 per cent rise above the debt level in 1994.¹ Between 1991 and 1994 the national debt averaged 87.1 per cent of the GDP (Central Bank of Nigeria 1995). Though prices of rural products generally rose, the rate of devaluation and inflation make nonsense of whatever income was generated. For instance, between 1986 and 1990 the Naira was devalued by about 87 per cent² and by about 386 per cent against the US dollar in 1992. As the Naira was depreciating, prices in rural food markets rose astronomically (Central Bank of Nigeria 1995). This put large but valueless sums of money into the pockets of farmers.

All these factors are significant in the decline of subsistence farming and the adoption of other means of livelihood. Other factors like family pressures, poor outputs due to a lack of adequate or affordable inputs, and poor real incomes from farms have all been further inducements for rural people to seek other or alternative avenues of enhancing their standard of living. The youth are persistently in search of escape routes to other sectors of the economy (Morgan 1988). But the inability of the formal sector economy to absorb the youth in both urban and rural areas keeps them within the agricultural and non-agricultural employment sector of the rural economy.

Historically, both farm and non-farm occupations complimented each another. While agriculture provided food and income, the crafts and services generated added income required by rural dwellers. The extent to which they now compliment or serve as alternative means of livelihood to households usually depends on how much support each provides the rural family in terms of food and income. The degree of support also determines the amount of resources allocated to the activities by individuals and groups. Thus under the structural adjustment regime, issues of economic activity diversification for the purpose of income maximisation require examination. The nature of the changes in economic activities and resource allocation is revealing.

¹ See Central Bank of Nigeria Annual Report, 1995.

² See Mustapha, A.R. 1991.

This paper has three major parts. The first two sections review pertinent literature followed by background information about the research methodology and the study location. The following sections present the research findings regarding the socio-economic background of the respondents, agricultural activities and the interrelationships between these sub-sectors of the rural economy. The data reveal rural income composition and relate it to the existence of social networks, community welfare and the future of agriculture. The final part summarises the findings and proffers policy options for agricultural and non-agricultural development in rural areas.

Rural Economic Structure and Livelihood: Farming and What?

Rural livelihood and welfare have agriculture as their bedrock, particularly in the less-developed communities. Understanding the dynamics and changes in the livelihood structure and operation of rural societies requires an understanding of agriculture in relation to other occupations in rural areas. It provides a foundation for tracing rural socio-economic development policies both at macro and micro levels.

The last two decades have witnessed an ever-raging debate on the rural economy. The debates have been, in part, on the socio-economic structure and the contribution of the rural economy to the national economy (Baker 1989). Also, rural labour mobilisation, employment, land tenure and ownership as well as spatial characteristics of Nigeria's agriculture have featured prominently in the discourse (Baba 1981; Griffin 1979; Agboola 1979). Some other studies have focused on rural household agricultural production, marketing and the spread of technology among farmers as important components of rural socio-economic expansion and surplus accumulation (Gudeman 1978; Berry 1975; Dijkstra 1997). Rural development issues have been closely tied to the theme of agricultural development,. For example van Dijk (1986) examined the problems of landlessness *vis-à-vis* agricultural and non-agricultural production, thus veering into non-agricultural production in rural areas.

The underlying objective of most studies and debates is finding suitable policies for rural, agricultural, and above all, economic development. Yet most developing countries, Nigeria included, have not been able to meet their food needs as they did 40 years ago. In fact, in Nigeria, the contribution of agriculture to the GDP has stagnated at between 23 and 27 per cent since 1975 while the value of agricultural exports declined from 70.8 per cent in 1964 to 1.1 per cent in 1982 (Abdullahi 1989). Indeed, rural unemployment and poverty have persisted over time. To understand the dynamics of these ills and make policy prescriptions, the rural socio-economic system has been subjected to various theoretical viewpoints.

Ekong (1988) and Barnett (1988) explained rural structure in terms of rural economic characteristics and social differentiation. From this position, the character of rural occupations whether directly or indirectly linked to land were analysed and categorised. Agriculture is tied to land while industrial and service activities are not. This economic activity system has produced classes of people who appropriate rural surplus. Ekong's and Barnett's analyses are

similar to the tenet of economic dualism (Todaro 1977) which explains economies of developing nations in terms of technological and organisational structure. Dualism, since it was postulated, has become an elastic concept for the analysis of sectoral relationships from both the economic and spatial perspective (Balogun 1992). The discussions distinguish between '*industrial*' or '*modern*' and '*traditional*' sectors. It is expected that with increased investment and technological diffusion, the traditional, over time, will yield to the modern. This provides a foundation for import substitution policies and heavy state investment in technology particularly in urban areas after independence. With this analysis the dichotomy is clear. On the one hand there is the rural-based traditional and agricultural sector and on the other is the urban-based modern industrial sector (Okowa 1991). The division may not be as clear as this due to the continuous incursion of rural activities into urban areas and urban activities into rural areas (Yesufu 1996). This incursion is the basis of the ever-enlarging urban informal sector and expanding rural modern craft and service sector.

When applied to the rural sector, economic dualism presupposes the existence of *urban* in relation to *rural* as well as *agriculture* in relation to *non-agriculture*. All the conceptions of dependency and centre periphery relationship are based on the complex relationship between this type of two-ended economic and spatial continuum. Dualism in rural economies is not so much in the *technical* sense of agrarian and industrial sectors but dualism in the sense of *agricultural* or *farm* and other *economic* or *non-farm activities* that are not necessarily agro-based. The agricultural sector is the main employer of labour. The craft and service sector (traditional: mat weaving, blacksmith, herbalists, builders etc.; and modern: barbers' salons, welding, photography, shoe repair etc.) provide full-time and part-time employment and income which rural dwellers exploit as other opportunities for livelihood.

Agriculture in the study area provides food for local consumption and exports to other food-deficit areas of Nigeria. The other economic activities provide services and goods to meet local demands. These two sectors compliment each other in their efforts to meet food needs, the costs of farming, as well as generating additional income for household commitments. Policy prescriptions from this theory have not been effective in engineering rural development. The dualism theory does not really enhance perceptions of the dynamics of rural employment and the welfare situation. Dualism has not resolved *what* the ideal relationship between *modern* and *traditional*, between *urban* and *rural*, and between *agriculture* and *non-agriculture* in rural areas should be. Therein lies the usefulness of some other concepts like 'informal sector'.

The informal sector, a concept adopted by the ILO in 1972 in a study of the Kenyan urban economy and popularised by Hart (1973), is used to describe the urban economic system. It refers to economic activities that take place outside regulated private or government establishments. All the same, the informal sector is not easily defined rendering measurement and data collection problematic (Bryceson 1996). It is more difficult in rural areas to identify what constitutes informal and formal economic activity. Indeed, in rural areas occupational

types in terms of farm and non-farm are easier to classify and measure which, of course, takes the discourse back to Ekong (1986), Barnet (1988) and Todaro (1977).

To possibly wriggle out of these theoretical issues, multiple modes of livelihood were used to examine changing urban employment structures (Mustapha 1991) and were applied socio-culturally to the rural diversification process (Seppala 1996). Multiple modes of livelihood are about individuals combining various sources of income-generating activities as a reaction to economic pressures. It provides a way of looking at a process of change in the structure of employment and examining the factors inducing such changes. However, the adoption of multiple modes of living depends on the existence of multiple opportunities and the required skills which an individual must possess in order to exploit the opportunities. He must also have the required resources, particularly capital. It is worth noting that multiple modes of living have been around for generations but have been magnified during the structural adjustment period. In rural areas, the blacksmith and the tailor have always done some farming. The farmer has often done some trading or operated a grinding machine or a beer parlour to generate additional income. Still, when the economy, the population and the ecology change, what happens to the rural occupational mix?

Efforts to solve this may reveal that, conceptually, multiple modes of livelihood are the same as diversification which ordinarily entails performing more than one economic activity to survive either in rural or urban areas (sectors). Both imply sourcing means of subsistence from various avenues. Though the urban and rural sectors appear as direct opposites of one another, when subjected to multiple mode or diversification analysis, the difference will be more of degree, structure and pattern.

It was at this point that de-agrarianisation as a concept explaining the nature of the relationship between agriculture and non-agricultural activities in rural areas was coined (Bryceson 1996). De-agrarianisation differs from the multiple mode analysis only in its rural and agricultural specificity. The concept presumes that there is a shift of people and resources from agricultural production to non-agricultural production as an option for independent livelihood in rural areas. This shift is induced by, for instance, the fruitlessness of agricultural vocation due to population pressure on land, ecological failure and the changing socio-economic structure of the society (El Bashir 1997).

De-agrarianisation, like the multiple mode of livelihood, presumes that certain factors at play propel individuals (from farmers in rural areas to white- and blue-collar workers in urban areas) away from their main occupations to other economic activities, or to combining the two to enhance living conditions. Rural dwellers drift from farming into non-farming activities the way urban dwellers, particularly public servants and industrial workers, shift into the unregulated sector of the urban economy. Within the framework of de-agrarianisation and multiple modes of livelihood, it is feasible to uncover the relationship between factors at work in the shifts in the rural occupational structure. Examining the dynamics of this process and the

extent to which other occupations in rural areas present alternative employment in distressed rural areas is the major task of this study.

Processes of Livelihood Change in Nigeria's Middle Belt

Agriculture is the foundation of agrarian societies and its development is a premise for the development of other occupations. Agricultural development, a component of rural development, induces increased production, creates and spreads employment, and removes or at least reduces poverty (Olawajaju 1992).

Since the adoption of adjustment policies, the employment situation has worsened. The national unemployment rate in 1991 was 4 per cent while under-employment stood at 25 per cent. In Plateau State, where Doma, the study village, is located, rural unemployment and under-employment were 5 per cent and 24 per cent respectively. Nationally, the bulk of rural unemployed in any one year are secondary school graduates (54.5%), those aged between 15 and 24 years (71.1%), and males (51.2%).³ These levels of unemployment, a major indicator of levels of poverty, are enough inducement for individuals to explore all possible avenues of livelihood particularly given the harsh economic conditions imposed by the adjustment programme.

Policies of agricultural development which include the diversification of the rural economy have, since the second national development plan, been embedded in Nigerian development policies.⁴ To allow policy implementation, huge budgetary allocations were made for the agricultural sector. In the 1970-74 period, 13 per cent of allocations to rural development went to agriculture and the creation of employment opportunities in rural areas.⁵ In the five-year period from 1975-80, various agricultural development projects were launched in collaboration with the World Bank to stimulate agricultural production and rural employment. In the 1981-85 period, the scope became wider incorporating the improvement of rural infrastructure and the prominence of agricultural production and diversification (Falade 1990). To attain these lofty ideals, N4.4 billion of the N84 billion planned for federal expenditure were allocated to agriculture.

This stated governmental concern and budgetary allocation notwithstanding, Nigeria has enormous agricultural potential. Of Nigeria's total land area, 77 per cent is arable.⁶ A good proportion of this arable land lies in the Middle Belt where soil quality and rainfall is adequate for agricultural activities. In addition to this, the work force on the land is immense, with over half of the population constituting the agricultural labour force. Agriculture itself also has a colossal role to play in the Nigerian economy in terms of providing food for the population,

³ See Federal Office of Statistics: Statistical News no. 158, October 1991.

⁴ See Nigerian National Development Plans of 1960-68, 1970-74 and 1980-85 in which this was emphasised.

⁵ This indicates the lack of opportunities in rural areas. See the second and third national development plans - 1970-74, 1975-80.

⁶ See the Third National Development Plan of Nigeria, cited in Ebii (1992).

raw materials to industries, generating income for rural inhabitants and thereby creating markets for industrial goods in rural areas (Yesufu 1996).

In spite of these policies and opportunities, agricultural activities and production have continued to decline as the food deficit grows (Baba 1981; Osuntogu and Oludumi 1986). The trend in agriculture has laid the basis for policies contained in the third and fourth national plans (Yesufu 1996). Agriculture was and still is in crisis. The victims of the crisis are the rural citizens, and the middle Middle Belt is not insulated from this crisis. Certain factors such as those that keep people away from farming were and are central to the puzzle. The major factors are population movements, educational development, soil conditions and the rising cost of inputs, particularly fertiliser.

The Middle Belt is underpopulated even though historically it has been involved in labour exports to other parts of Nigeria. The export of labour became necessary with the poor prices of food crops. To earn higher income, youth migrated to cash-crop booming regions. During the 1960s and 1970s the exports were chiefly to the cocoa-producing areas in the south-west of Nigeria and the fast-growing cities of the north, especially Kano and Kaduna. Before migrating to the cocoa belt, 40-70 per cent of the people had carried out some type of non-farm activity (Berry 1975). On their return, the migrants normally set up in non-farm activities and kept farming as a secondary activity. The point is that migration to cocoa farms not only took the migrants out of household farm labour but also out of the farm.

An impetus to the flight from the farm is educational development. In 1974, Nigeria adopted universal and free primary education. Parents sent their children to school and in the process the youth lost the urge to farm and the necessary skills. When the formal sector could not absorb them, they ended up in towns or stayed, jobless, in the village. Indeed, educational development spawned a form of migration, namely the movement of educated youth from rural to urban areas in pursuit of white-collar jobs. Currently, households in Doma have one or two persons in towns and cities. This migration has further reduced labour from the farms. Those who stayed behind in the villages and returnees adopt livelihood strategies outside the farm.

Labour export and education have left agriculture undeveloped. Land has been under-utilised and the scale and intensity of cultivation have declined given the high population required for agricultural innovation and increased output (Jiggins 1994). The drift of population which has weakened agricultural production has also made agriculture less attractive as an income-generating activity and launched people further into non-farm activities.

The Middle Belt soil which used to have a high fertility is far less fertile now due to erosion, leaching, etc. Its forests are being devastated daily. Moreover, the soil is easily depleted. Even with adequate rainfall, exhausted soil makes agricultural production low, reducing its ability to support households. The decreasing fallow is an indication of this as the period has decreased from about 5 years to 1-2 years of fallow. Farmers are, therefore, moving further away from Doma in search of virgin forest, which is fast being depleted. The implication is that physical access to land is limited. Farmers must be able to own or pay the

cost of the movement of labour and inputs to distant farms. Another consideration is the increasing devastation of the land and the environment. The slash-and-burn farm practice exposes the soil to further leaching and erosion. To improve the soil output, manure and fertiliser are required but they are not the cheapest farm inputs in Nigeria. Since the adjustment policies were put in place, not only have inputs become extremely scarce, but their prices have gone beyond the reach of many farmers.

Finally, population agglomeration due to the frequent creation of states, and local and district councils each with its own headquarters has created a demand for non-farm goods and services. These areas are attracting greater populations of council workers and their families as well as those in search of other opportunities. The converging population's demand for repairs, dressmaking and transport services among many others provide opportunities for non-farm activities to flourish. Individuals exploit these opportunities to enhance their living conditions.

Thus, population movement, environmental degradation⁷ and rising costs of inputs interplay to set in motion processes of de-agrarianisation, and the development of multiple livelihood support strategies. The end result is individuals, households and groups adopting a combination of various income-generating activities to cope with the exigencies of living.

The objective of this paper, therefore, is to examine occupational structure and income generation in Doma. The paper demonstrates trends in occupational changes and resource allocation. The aim is to show the implications of the shifts of production resources for various social categories in a settlement in the Middle Belt of Nigeria.

Research Design and Study Area

Methodology

The data were collected over a period of twelve calendar months from June 1996 to May 1997. From a population of about 1,500 households,⁸ 100 households were sampled from different clusters of the village. In the sampled households, household heads were interviewed on issues of general socio-economic composition, employment, and the farm and non-farm production of household members. From among the 100 sampled households, 40 households were randomly sampled for in-depth monitoring. In these 40 households, a total of 256 persons were interviewed. This stage of data collection involved interviews with household heads, wives, children and dependants, not only to determine their economic production activities but also to establish the pattern of their economic activities, resource allocation, and linkages between each of their activities. After the first questionnaires were administered to respondents during the rainy season, the same questions were asked during the harvesting season, the off season (dry

⁷ The argument about environmental degradation as an inducement factor in the de-agrarianisation process is fundamental to the postulations of Bryceson (1993) and Berkvens (1997).

⁸ Staff at the District Head's office were useful in providing information that helped in establishing the sample frame.

season), and planting periods, such that respondents were monitored during the various essential stages of rural production.

To supplement the data generated at the household level, non-farm activities in the village were surveyed by administering a questionnaire to the operators. For the survey of non-farm activities, a proportionate sampling technique was applied recognising the relative importance and prevalence of each activity from a list of various types of activities identified. Thus 50 activities were sampled. Those sampled included wild fruit collectors, traditional and spiritual healers, tailors, blacksmiths, hairdressers, shopkeepers, hawkers, food vendors and shop employees, sex workers, formal and informal sector workers, agricultural produce processors, traders, transporters, etc. The survey of these activities aimed to gain insight into the history, operational facilities and problems of the non-farm activities in the village. Further to data generated through the questionnaire at both household and non-farm activity levels, discussions were held with some individuals, particularly old men and women, traders and other non-farm activity operators. Discussions were also conducted with officials from the Lafia Agricultural Development Project in addition to sourcing documentary data from the project.

The data were used to generate basic descriptive statistics and the distribution of certain variables among social categories. The production strata of households were established through the creation of production levels. Agricultural output of households and prices of the outputs were used to compute and determine the production strata of respondents. In using the prices of the produce, the produce that had the highest price was taken as the basis for comparison. Prices of other produce were therefore expressed as a ratio of the highest price. The price ratios for all the crops were added up and the product is the total production index of the respondents. Based on the total value of the indices, respondents were stratified into small-, medium- and large-scale producers.

Certain methodological issues were confronted at the levels of data collection and of analysis. A common feature in the village is that the vast majority of households are male-headed, such that all households sampled were male-headed. The social and economic structure of female-headed households was not part of the data collected. In any case, data on female economic and social activities were collected at the level of the 40-household survey. In the 40 households, 81 females were interviewed. Secondly, in the survey of non-farm activities, the establishments were purposely selected to allow for a spread. This does not mean adequate representation of all categories of non-farm activities in the sample. Indeed, some specific activities like petty trading, hawking, street food⁹ etc. may in this respect be disadvantaged in statistical aggregates. The third issue has to do with problems of logistics and research fatigue given the length of the survey. The farmers have a habit of moving to farm houses with the whole family for the entire farming season. Reaching them was problematic. Some were followed to the farm, some were interviewed whenever they visited home, while others were

⁹ These are very prevalent activities in the town and are dominated by female children who sell for their parents and a few female adults frying yams and *kosai* (bean cake) or selling cassava flour.

interviewed at a much later date when they became available. In the same vein, after the first two visits, respondents began to show fatigue. Nonetheless, having established rapport, the interviewees kindly continued to cooperate. Due to the sheer volume of data collected, it required a lot of effort to highlight the critical issues in the research.

All types of data collected compliment one another and provide an adequate basis for understanding the underlying dynamics of farm and non-farm activities for rural employment and development.

Study Location

The Region

Doma, the study settlement, is located in the middle Middle Belt of Nigeria. The middle Middle Belt is most difficult to define socio-spatially and politically. Loosely, it lies within 8°N and 10.50°E and covers all the areas inhabited by the ethnic minorities of northern Nigeria (Eniola 1972). The minorities include the Igala, Igbirra, Idoma, Tiv, Nupe, Gwari, Kadara, Alago and Babur among many others on the Jos plateau and in the southern Zaria region and the minorities of Kwara. Geo-politically, the Middle Belt stretches over Kogi, Kwara, Benue, Plateau, Nassarawa, Kaduna, Taraba, Yobe, Adamawa and part of Bornu States. Conceptually, the Middle Belt encompasses Kogi, Nassarawa, Benue, Niger, Kwara and Plateau States, the Federal Capital Territory and southern Kaduna State. Only these areas can be said to be located in the central areas of Nigeria.

The area is known for its low population density. It covers 37 per cent of Nigeria's land area but has only 16 per cent of its population (Eniola 1972). More recently, the area is estimated to have just a fifth of Nigeria's population (Baker 1984).¹⁰ Idachaba (1985) estimates about 24.5 persons per square kilometre. The low population density has apparent implications for levels of land utilisation, particularly agricultural activities and non-land-related economic activities.

Doma is under the influence of the regional climate, vegetation, land forms and soil types of the middle Middle Belt. Doma itself is located on gently rolling land of up to 200 metres above sea level. Hence, it is characterised by plains on the Cretaceous sediments. The soils are mainly canbi soils and ferratic arenosols which are moderately suitable for agricultural activities. The soil can be cropped with the application of organic or chemical fertiliser.

The region has two seasonal climates - the dry and wet seasons. In the wet season, the area gets up to 1,250 mm of rainfall annually with a break in August. On the whole, Doma lies with a mean annual sunshine of 2,250-2,500 hours in the Middle Belt of Nigeria. The vegetation is that of Southern Guinea Savannah with elements of mosaic rain forest. A main feature of this is the extensive wood and grassland vegetation cover. With these, virtually all forest and savannah crops do well in a substantial part of the Middle Belt.

¹⁰ Population figures are politicised and unreliable in Nigeria.

The Settlement Area

Doma is located at a latitude of 8.25° N and a longitude of 8.22° E in Southern Plateau State of Nigeria.¹¹ It was the capital of the now defunct Doma kingdom founded by the Alago in about 1232 AD under the tutelage of the Andoma. It was a district council headquarters in Awe local government area before it became a local government headquarters in Plateau State and now in Nassarawa State. With an estimated population of 18,479, Doma is about 30 km south-west of Lafia, the capital of Nassarawa State.

As a local service centre, Doma has a number of facilities (erratic water and electricity supplies, health facilities, schools, postal services etc.) and some physical infrastructure particularly roads. A good tarmac road currently links Doma with Lafia while footpaths and rough seasonal roads link it with neighbouring villages. Local council offices of the district and traditional ruler, the Andoma of Doma, are major administrative institutions in the town. In addition, there are local offices of both federal and state agencies - the National Population Commission, the National Orientation Agency, the Lower Benue River Basin Development Authority and the police post among others.

Doma is characterised by numerous small ethnic groups. It was originally inhabited mainly by the Alago, Tiv and Agatu. However, there are well-established Hausa, Nupe and more recently Ibo settlers in the area. Hausa is the main language of communication in the settlement.

Doma has a large weekly regional market. People come from all over the country to buy food crops from the market. Buyers are drawn from Lagos, Port Harcourt, Jos, Enugu, Kano, Ankpa, and Abuja among others to buy large quantities of commodities¹² which are taken away by truck. The market is an avenue for those who wish to diversify into trading but have little capital.

The rationale for the choice of Doma for the study is based on its position as a small town, its proximity to Lafia and its easy accessibility. Its changing status from a district to a local council headquarters makes Doma a potential area for population growth and therefore a possible market for farm and non-farm goods and services. As a small town servicing a range of other settlements, Doma is a growth point where non-farm activities have a tendency to thrive. Enhancing the growth of non-farm activities is the large regional agricultural produce market that is patronised by traders from near and far. All these factors make Doma an ideal location for the exploration of the notion of livelihood diversification and de-agrarianisation.

¹¹ Midway through the data collection, additional states were created in 1996. Doma was moved from Plateau State to the newly created Nassarawa State.

¹² Traders talked to quoted huge quantities of market-day sales. A typical estimation is made up of 50,000 yams, 15,000 bags of groundnuts, 10,000 bags of millet, 18,000 bags of melons, 12,000 bags of cassava, 5,000 bags of cashew nuts, 15,000 bags of sesame seeds and 80 bags of rice. These quantities are obtainable at peak harvest periods. After that the quantities drop.

Socio-economic Characteristics of Respondents

This section discusses the birth place, religion, sex, age, education and occupations of respondents.

Origin and Religion

Of the 100 households surveyed, 97 per cent are indigenes of Doma. Only three, two from northern Nigeria and one from south-eastern Nigeria, are migrants. In this respect, the composition of operators of the 50 non-farm activities surveyed is significantly different as the operators have diverse origins. The non-farm activity operators are made up of people from Doma (58%) and its environs (18%), northern Nigeria (14%) and south-eastern Nigeria, principally Ibo (10%).¹³ It is interesting to note that while agriculture is dominated by the indigenes, migrants participate in the non-farm sector of the rural economy.

Two-thirds of the sample are Muslims and a third are idol worshippers. From available evidence, while Islam wins converts in the area, Christianity has the least impact, a fact which was observed long ago by Eniola (1972). Despite the preponderance of Islam in the area, women are visibly involved in outdoor economic activities as the practice of purdah is limited to only a few.

Sex, Age and Education

In a sample of 100 respondents, all were men. In the in-depth study of 40 households, 31 per cent of respondents were women and 68.4 per cent were men. In the survey of non-farm activities, 18 per cent were females and 82 per cent males. The sample of 100 were aged 20-45 years (56%), 46-65 years (32%) and 66 years and over (12%). This is typical of rural populations in which, though there are younger inhabitants, the presence of the older population is still prominent due to out-migration of the younger people to towns and cities.

In the non-farm activities sample, 66 per cent were 40 years old or younger, 27 per cent were between 41-50 years of age and the remaining 6 per cent were between 51-70 years. Two things are implied here. The presence of the older generation in this sample shows that non-farm activities are age-long activities in the settlement. Secondly, due to developments and the interplay of other factors like unemployment, economic hardship and the unattractive nature of farming, the younger generation appear to dominate non-farm activities in Doma.

Over two-thirds (68%) of the 100 households were headed by people with no western-style education. About 22 per cent were literate in Arabic, and 24 per cent had completed primary, secondary or post-secondary education. In a general discussion with the inhabitants there appears to be a preference for sending some of their children to school and some to other

¹³ For the Ibo, the rural areas currently provide alternatives to the highly competitive urban informal sector. Therefore they are spreading to the villages in the north and setting up in the non-farm sector in which they do very well. One Ibo shop was observed to be well stocked with provisions and there are indications that Doma is a profitable place for operations.

sectors of the economy firstly in order to minimise the risks of keeping everyone in one sector and secondly to sustain household farm labour.¹⁴ Furthermore, 58 per cent in the sample had other skills in building, bricklaying, tailoring, or as a blacksmith, auto mechanic etc. The level of education among non-farm activity operators was higher which confirms the speculation that it is the young school graduates who are moving into non-farm activities in the rural areas since they undertake little or no farming and cannot be absorbed into the formal sector. Among the operators, there were some with an Islamic education (42%), and those who had completed primary (14%), secondary (28%) and post-secondary (2%) education.

The diverse educational levels and skills of the respondents is related to the higher proportion of young and middle-aged adults. This age bracket contains the innovative, motivated and adaptable individuals. The likelihood that those in this age group will stick to farming as the only source of livelihood under the prevailing economic situation is low.

Occupation of Household Heads

Occupation is defined by a series of criteria which include the nature of activities, its skill requirement, and the extent of livelihood support provided to operators among others (Ekong 1986). Rural life-support systems tax land resources directly or indirectly through farming, animal tending, fishing and agricultural product processing and trading. Often this is the main occupation and source of livelihood of rural dwellers. Indeed, for most rural communities life has always depended on farming and farm-related activities. Other occupations, however, have existed in various forms and levels in rural areas over a long period of time. These other occupations, which are regarded as secondary to agriculture, include a wide range of crafts notably pottery, weaving, carving, carpentry etc. and services like food vending, dressmaking, healing, retail trade, transport services etc. These secondary activities are pursued as income-generating activities particularly during off-farm seasons. The extent to which they have become alternatives to, or complement farming depends on the needs of the individuals and groups.

The main occupation of the 100 household heads surveyed was farming. Ninety-four per cent of household heads were primarily farmers. The remaining 6 per cent were involved in wild fruit (locust beans, shea butter, etc.) collection, blacksmithing, trading, public sector employment, transport service operation etc. as their main occupations. In addition to farming, 63 per cent were engaged in a wide range of other income-generating activities as secondary occupations. The secondary occupations include trading in general goods and farm products (27%), transport service provision (13%) and various others such as farm produce processing, dressmaking, carpentry, crafts, etc. The combination of farming and other occupations is a phenomenon that dates back a long way. Indeed, four-fifths of the sampled household heads

¹⁴ For instance, in one household, out of 30 children, 15 went to school and the others were involved in trading, farming and operating public transport equipment. In another household of 10 children, 3 went to school and the rest were doing bicycle repairs and farm activities.

started their various non-farm occupations before 1979 while only 10 per cent started their occupations between 1980 and 1987 and 63 per cent of other members of the household started non-farm activities very recently in the period between 1986 and 1997. As a result of the latter, the combination of farm and non-farm as livelihood activities has intensified during the economic crises and structural adjustment period. In other words, rural dwellers have always combined farm and non-farm modes of livelihood but this has become more marked since the adjustment period.

Occupation of Other Household Members

Households were generally large with an average of 18 persons per household. The household, on average, is made up of a husband (who was also the head), wife/wives, children and relatives. The men are married to between 1 and 8 wives (3 wives on average) and have, in addition, about 11 children and 4.6 other dependants. The number of people thus depending on the household's production is high. It becomes imperative for other members of the household to engage in income-generating activities. In the 100 households, there were, on average, 4.3 working adults, 1.3 males and 2.9 females per household.

At the household level, suffice it to say that dependants were indicated by household heads as being engaged in a wide range of activities including food processing, tailoring, general retail trade, catering (roadside food and beverage services), tailoring, and hair plaiting among others. It is interesting that the involvement of dependants (67%) in these activities dates back 10-15 years. Furthermore, of the 81 females interviewed in the households, 12.3 were farmers on their own farms inherited from parents or allocated by their husbands, and the remainder were engaged in the buying and selling of general goods including agricultural produce, knitting, hair plaiting, tailoring, and soap making among others of less importance.

Agriculture

Trends in Agricultural Activities

The Middle Belt is the food basket of Nigeria, producing root crops (yams, cassava, potatoes etc.) and grains (maize, millet, sorghum, rice, etc.). Important cash crops of the area include sesame seeds, groundnuts, cotton and sugar cane. However, the Middle Belt is not known for international market-oriented agricultural production. The insignificant export cropping in the area is the only explanation for its neglect by colonial and post-colonial governments (Abumere 1993). The area has remained predominantly agricultural but the presence of non-farm activities is also recognised. In a study of the Abuja area of the Middle Belt (Abutter 1993), it was found that the respondents were involved in a range of economic activities such as farming (74.2%), trading (9.1%), cattle rearing (0.3%), crafts (1.5%), services (10.1%) and other occupations (4.5%).

Almost everyone in Doma is a farmer. The Middle Belt is noted for food crop production particularly root crops such as yams and cassava. Root crop production faces great competition

from grain production. A 1957 report showed that the Middle Belt was a net exporter of food to other parts of Nigeria with a regional surplus production of yams (101,000 tons), rice (2,993 tons) and grains (224,000 tons).¹⁵ Yet, export agriculture in the sense of international trade is quite insignificant in the economy of the Middle Belt compared with cocoa and coffee production in the south-east, oil palm products in the south-east, and groundnuts and cotton in the north.

The area, known for yam production, is gradually drifting towards the production of grains mainly because yams require intensive labour and a longer maturation period, are difficult for mixed cropping and achieve poor prices.¹⁶ High prices are important for people to enable them to meet household needs in the current difficult economic situation. Moreover, with declining soil fertility and farms becoming more distant, mixed cropping is crucial to farm resource management and production maximisation.

Between 1986 and 1992, in absolute terms, the price of yams rose by 1,613 per cent, while the prices of maize, rice, sorghum, sesame and groundnuts rose by 2,627 per cent, 1,664 per cent, 1,908 per cent and 2,061 per cent respectively between 1987 and 1995.¹⁷ The shift in the prices of agricultural products encouraged farmers to shift resources to the production of grains. In fact, nationally there has been a consistent fall in the production of yams. Maize production rose by 15.6 per cent while yam production went down by 21.3 per cent. In the same vein, the area of maize cultivated went up by 5.1 per cent and that of yams declined by 25.2 per cent.¹⁸ There is a shift of resources from the production of one type of crop to another.

The agricultural system in the Middle Belt is predominantly that of slash-and-burn cultivation with a fallow period of 3-5 years. The area is sparsely populated compared to the Kano closed settled area and the southern regions of Nigeria. The area was depopulated by slave raids during the 19th century (Eniola 1972), and later by labour migrations to the mines of Jos, the cocoa belt of south-west Nigeria, and other towns and cities.

The Middle Belt is characterised by an extended family system headed by males. The eldest male in an extended family is often the political and economic head of the household. The head dominates household decision making, coordinating the household's farming and other economic activities in terms of land, labour and resource allocation.

Land is not a problem in the Middle Belt, at least in terms of quantity. Communal land tenure operates together with state control through the local government, based on the 1978 federal Land Use Decree. Ordinarily, land belong to families and individuals who are at liberty to use, rent or loan it out, or allocate it to others at no fee. Despite the large expanse of land,

¹⁵ See Eniola, 1972

¹⁶ This was discussed with inhabitants of Doma and LADP officials who confirmed declining yam production in the area.

¹⁷ This was computed from data collected from LADP, Lafia.

¹⁸ See Yesufu (1996) for a more detailed analysis.

land problems are beginning to manifest themselves in another way. The quality of the land is fast degenerating, fallow periods are on the decline and farm plots have become more distant from Doma. As in most patrilineal societies, men control the land, appropriate family production resources, and deny women access to resources including land, believing that they themselves provide for the females (Ezuma 1988). However, in Doma, women are entitled to inheritance and can purchase land if they have the means. Yet they generally have less title to land than males. Indeed, the traditions of land inheritance are more favourable to men than to women. This land title constraint is a further impetus for women who want to earn income to either support themselves or for households to turn to non-farm activities.

Families are often large with many wives, children and other dependants. This is consistent with farming communities since family size is a significant determinant of farm labour supply. But in a situation of depleted soil, lack of inputs and harsh economic conditions, the high level of dependency in such communities creates heavy responsibilities for the household head to provide for the needs of all members and the tendency will be for household members to go in search of their own means of livelihood or develop some life-support systems. The consequences, as earlier noted, are a drift away from agriculture, and the diversification of occupations and sources of livelihood. Many agricultural development projects dot the Middle Belt. Significant to the study area is the Lafia Agricultural Development Project (LADP). The LADP is one of the World Bank-initiated and funded agricultural projects in Nigeria which aims to boost agricultural production and enhance the rural infrastructure base for improved rural welfare. The project was jointly funded by the state, the federal governments of Nigeria and the World Bank.

Number of Farms

Agricultural production in Doma is a function of access to and the size of land owned by farmers. The survey findings reveal that households have fragmented holdings of about 2-3 parcels of farmland which are cultivated. The amount varies across income groups with the highest income group owning a mean of 9.6 parcels of farmland against 1.7 for the lowest group. From a generational perspective, the younger generation (20-40 years) tend to cultivate farmland that they borrow or rent rather than owning. The older generation have accumulated land over the years and have less need to cultivate rented or borrowed land than the younger ones. On the whole, a majority claim to have more farmland than their fathers but a third still insist they have far less farmland than their fathers. In any case, there are indications that the older generation have greater access to land than the younger people who have to rent or borrow farmland.

Within households, the heads had greater farm sizes with a mean farm size of 10.8 ha. On average, male dependants, that is 32.4 per cent of the 40 households, had 3.5 hectares, while on the other hand, females had an average of 0.5 hectares. Despite these small holdings by females within households, they had about 2-3 parcels of farmland in different locations. If

women want to farm,¹⁹ the amount of land available to them and the level of land fragmentation is uneconomical to till.²⁰

Labour Allocation

Small holders generally require intensive use of labour for planting, weeding, harvesting, transporting etc. and this is supplied by the family (Eze and Ogenyi 1992; Okuneye 1992). This intensity of labour demand, particularly at peak farming periods, requires a judicious use of labour. During the farming season, farm work is shared by the family. In Doma, adult males do the bush clearing and ridging and plant the crops with the children. Together, adults of both sexes²¹ and children carry out *shama* (weeding), harvesting and the transportation of produce. Further to this, the women may be required to serve refreshments (snacks, food and drinks) on the farm. Marketing is carried out by both males and females depending on the family and the quantity involved. Males tend to market large quantities of the produce and the proceeds are invested in trading, another wife, or farm activities.

Though the family remains a major source of farm labour in Doma, other sources include labour exchange groups and migrant farm workers who can be hired. By offering food and drinks, an exchange group will work on a member's farm for a day. And it thus rotates. A member of the group can sell his turn if he so desires. Migrant farm workers come from Eggon settlements in the north-east of Lafia.²²

Labour allocation is important to the production levels in the society. Increased labour allocation to a given activity increases production. When this is applied excessively over and above other resources, labour output declines (Eniola 1972). Family labour, made up of adult males, wives, children and other dependants, is a major source of farm labour in the middle Middle Belt. According to Eniola (1972), only a fifth of farmers in the Middle Belt use hired labour. In this sample, about 26 per cent use hired labour on their farms.

Young wives tend to stay living longer with their parents in this area for a variety of reasons and the husband may migrate to join his wife at his in-law's home.²³ This may also be explained by the use of sons-in-law by fathers-in-law on the farm. Therefore, the longer the wife stays with her own parents, the larger the family labour supply. On the whole, individuals

¹⁹ Though the community is predominantly Islamic, *purdah* is not adhered to as in the core Islamic areas of the north such that women are involved in their own and household farm activities.

²⁰ There was one woman, the wife of successful farmer, who had 10 plots of farmland that she cultivated with the assistance of her husband, relatives and hired labour. Apparently this woman was one out of a thousand.

²¹ In some of the households, the women are compensated with crops at harvest for their roles on the farm.

²² The Eggon area has little or no farmland as it is characterised by hills. Moreover the area has a large population of youth. These factors make it imperative for the Eggon people to go in search of livelihoods by working on the farms of others.

²³ A probe into this revealed that the wives stay behind with parents to help on the farm which enables parents to perform some rituals and guarantees her access to inheritance on the death of her parents, particularly from her father.

who have large crop outputs invest little or none of their labour on the farm. On the other hand, small producers do virtually all their own farm work.

There are differences in household sizes across the production strata. Households with high agricultural production tend to have large household numbers with a mean of 14.8 people, working adults (6.9) and working children (7.9). On the other hand, those in the low production strata have on average only 5.0 persons in their households with 2.9 working adults and 2.1 working children. It is suspected that production level is related to household size and this underlines the significance of family labour in the farm production system. In this sense, the production of children is tied to the farm labour demands of households. This notwithstanding, the situation is changing.

The changing economic situation, schooling, and the need for self-realisation are affecting the structure of the family and relationships (Lloyd 1972). Those who went to school and/or have migrated to towns set up nuclear families in places of work maintaining only socio-economic links with the extended family while investing in the training of their own children outside farm activities. This group of individuals is automatically taken out of the extended family labour pool because of education.

Furthermore, within households, members currently tend to work more on their own farms (68%) than on household farms (25%). That is, at household levels, there is an increasing individualisation of economic activities, including agriculture.

Women have different labour allocation patterns to those of men. From the data, it is obvious that they are increasingly spending more time on non-farm activities than on the household farm and even domestic work. Among the 81 females surveyed in households during the in-depth study and monitoring, 67.9 per cent spent more time on non-farm activities than on farm activities and 24.7 per cent had increased the time they spent on household farms. The pattern in the use of labour is that of a shift from a strict devotion to household labour to using one's own labour for one's own economic activities and personal advancement. This income drive tended to enhance the personal income of males, females and dependants rather than the household income because people were moving away from joint household economic production activities. Income generated from the non-farm activities that people were increasingly spending more time on tended to be at the discretion of individuals.

Cropping and Crop Mix

Agriculture is dominated by men and they have the highest production. Women are on the lowest rung of the production strata. The biggest producers are the older ones in the community which is not surprising as the ability to mobilise production resources - land, capital etc. - increases with age. The people are mainly wet-season farmers. Virtually all household heads (96%) were involved in wet-season farming but since 1980, only 5 per cent were engaged in dry-season farming.

Crops produced by both household heads and non-farm activity operators included the grain and root crops. Among household heads, production was highest in yams,²⁴ cassava, millet,²⁵ maize, sorghum, groundnuts and sesame seeds²⁶ in that order of importance (Table 1). Popular crops among non-farm activity operators were maize, cassava, sorghum, yams, groundnuts, rice and millet in that order of significance. Except for sesame seeds and groundnuts which are cash crops, the others are food crops that are either consumed in homes, sold within the Middle Belt or exported to food-deficit areas of the north or south of Nigeria. It was observed that agricultural production was commercially oriented. Discounting crops with very low production levels, an average of 76.3 per cent of food crops produced by households were sold. Yams, sesame seeds, melon, groundnuts and millet were produced for sale more than other crops (Table 1). On the other hand, about a third of maize, sorghum and rice supplies were consumed within households.

²⁴ This should not be confused with the regional and national drop in yam production.

²⁵ Millet is produced and used for *burukutu* (local beer) and *mandidi* (a popular local snack).

²⁶ Sesame seeds are an important soup ingredient in the Middle Belt and are widely used in the country. There is, therefore, a large internal market for its production. Moreover, the crop does well in poor soil.

Table 1: Crops Planted and Mean Quantity Harvested and Sold by Respondents

Crops sold	No. of HH growing crop	Quantity harvested (bags)*	Quantity sold (bags)	Difference (bags)	Percentage sold
Maize	84	22.2	13.9	8.3	66.6
Sorghum	72	15.3	9.3	6.0	60.8
Millet	68	22.8	15.8	7.0	69.3
Rice	37	7.8	5.8	2.0	74.4
Cow peas	22	1.9	1.2	0.7	63.2
Groundnuts	55	17.6	14.2	3.8	80.1
Melon	39	6.7	5.6	0.8	83.6
Sesame seeds	74	16.2	13.1	3.1	80.9
Cassava	65	50.1	37.1	13.0	74.1
Yams	76	118.3**	114.4 **	3.9**	6.7
Soya beans	2	0.02	0.02	0.0	100
Sugar cane	4	4.9 +	4.9+	0.0+	100

Source: Author's fieldwork, 1997

* one bag is 100 kg

** measured in kwariya = 100 tubers

+ measured in bundles = 30 full sticks

Household total income was stratified into three groups: N1,000-30,000 is low income, N30,001-100,000 is medium income and N100,001 and above is high income. Table 2 shows the distribution of respondents who produce the various types of crops by income strata. Those in the lower income stratum produce far less than all others in the two upper income strata. It is the low-income strata respondents who are more involved in the production of sugar cane (mainly for the market), millet (a major staple in Doma), yams, groundnuts and maize.

Table 2: Mean Crop Output of Respondents by Income Strata

Crops	Income levels		
	Low (N=161)	Medium (N=57)	High (N=38)
Maize (bags)	1.0	4.6	28.3
Sorghum (bags)	0.0	1.0	13.6
Millet (bags)	2.4	3.3	23.5
Cow peas (bags)	0.0	0.1	0.7
Groundnuts (bags)	1.4	7.3	39.5
Rice (bags)	0.1	0.9	35.1
Cassava (bags)	0.5	2.8	98.7
Melon (bags)	1.1	4.7	30.3
Yams (kwariya)	85	591	3647
Sugar cane (bundles)	9.9	15.6	6.7

Source: Author's fieldwork, 1997

When respondents were reclassified based on total crop output, naturally, the small crop producers had the lowest mean crop output (Table 3). On the other hand, the younger ones in the sample were venturing into the production of crops (sugar cane, soya beans, sesame seeds, groundnuts, etc.) that apparently have potential markets even in Nigeria.

Table 3: Crops Produced and Mean Output by Production and Age Strata

Crops	Production strata			Age strata (years)		
	Small	Medium	Large	20-45	46-65	Over 60
Maize	10.2	21.1	51.8	23.4	22.2	16.0
Sorghum	3.1	4.0	45.5	12.7	16.7	24.6
Millet	5.0	29.0	51.2	20.7	26.6	23.0
Rice	1.7	6.5	24.6	7.3	9.6	6.0
Cow peas	0.6	1.9	4.9	1.9	2.4	0.8
Groundnuts	7.3	18.2	39.6	15.8	21.5	15.0
Melon	1.6	7.6	16.2	4.9	11.6	1.6
Sesame seeds	3.1	18.6	41.1	12.7	23.2	13.7
Cassava	13.2	46.1	141.1	46.9	58.4	41.2
Yams	6.9	20.4	561.3	196.3	14.7	23.2
Soya beans	0.04	-	-	0.3	-	-
Sugar cane	7.2	4.7	0.0	7.7	1.5	0.0

Source: Author's fieldwork, 1997

Note: Units of measurement in this table are the same as in previous tables.

Young farmers in the sample tend to pursue vocations in the non-farm sector. They have their feet in agriculture by farming sesame seeds, melon and groundnuts for quick money and at the same time carry out other non-farm economic activities. Generationally, agricultural production is more in the group of those between 46-65 years of age. In this age bracket, household pressures and a desire to accumulate are the driving forces.

The respondents are also involved in livestock keeping. About 40 per cent of them keep livestock and 26 per cent of the entire sample have established livestock farms since about 1986. The most common livestock is poultry with an average of 50 chickens per household. Sheep and goat keeping averaged 4 per household. However, livestock keeping is not a major source of livelihood in the Middle Belt, possibly due to ecological and cultural factors.

Agricultural Inputs

Most of the soils in the Middle Belt have been leached so that agricultural activities cannot be meaningful without the use of inputs. As Agboola (1979) asserted, the brown or reddish-brown ferralitic soil around Doma has low matter content, poor drainage, full-base saturation and a low productivity status. To maximise agricultural production, fertiliser needs to be used. Further to this, the large expanse of farm land makes it imperative to engage labour at the peak farming season when family labour is insufficient. The various sources of farm labour were identified and discussed earlier but it should be noted that at peak periods of the farm season, labour supplies can be problematic.

Among household heads, 48.9 per cent purchased and used fertiliser, manure or crop residues and insecticides, while 32.6 per cent hire labour. The use of agricultural credit either from formal or informal institutions was quite low. Only 5.7 per cent buy inputs with a loan. Instead, the purchase of these inputs is mainly through the sale of crops. Agricultural wage labour, remittances and gifts were insignificant in this respect.

Farmers arrange for Fulani cattle rearers to camp on their farmlands during the off-farm season to obtain cattle manure for a fee. Otherwise, the farmers buy dung and take it to the farm. Chemical fertilisers and insecticides used to be obtainable at agro-service centres run by government agencies. Between 1970 and 1980, a 50 kg bag of fertiliser cost between N6 and N20. Between 1980 and 1990, the price more than tripled.

In the 1997 cropping season, a bag's cost had risen to N1,200 following the adjustment policies of deregulation, privatisation and the commercialisation of the agricultural sector. The high cost of fertiliser has pushed farmers in the area to produce crops - sesame seeds, melon, groundnuts, cassava etc. - that do not require the use of fertiliser but which are not staple foods either. If crops requiring fertiliser, particularly maize and millet, have to be produced, minimal quantities of fertiliser, manure or crop residue are applied. In the community, the cost of fertiliser has popularised the use of crop residues as an organic fertiliser. Since about 1993, farmers have increased their use of rice shaft given that the shaft improves their soil and yields, and, at N100 per bag, it is cheaper than fertiliser. Some farmers, due to cost, do not apply

anything at all. Given the soil type of the Middle Belt, this is not a healthy development as it endangers the livelihood of the farmers.

Non-farm Activities

The study of non-farm activities was carried out at two levels. The first level was that of the household where heads and members were asked about their non-farm activities. The second level was the survey of the non-farm activities themselves in which the operators were interviewed. Discussion in this section will cover both.

Any activity that does not generate income directly from working on one's own family farm or in animal husbandry is regarded as a non-farm activity. Non-farm activities include agricultural wage labour, agricultural produce processing, crafts and services. For a long time, non-farm activities have been a part of rural life (Olayide 1980). A wide range of other economic activities are found in Doma. These include traditional services and crafts, modern services and crafts, and petty and small-scale trading among numerous others. All require different skills and a capital base. To rise to the challenge, people in Doma are learning new skills in carpentry, driving, tin smithing, blacksmithing, electrical repairs, tailoring, and auto mechanics among others.

As earlier observed, non-farm activities are age-old activities in rural communities like Doma. This is particularly so with traditional activities like carving, weaving, wild fruit collection, blacksmithing etc. Modern services like repairs and shop keeping are very recent. Research has revealed that activities like bicycle repairs started in Doma in 1930, motorcycle repairs in the late 1950s, and grinding machines in 1969. Some other activities that came along later include shop keeping (1966), photo studio (1977), 'express' or 'going', namely motorcycle transport (1984), and modern barbers (1991), all providing common employment opportunities for secondary school graduates in rural areas. As non-farm activities grow, more and more people are going into them on a part-time or full-time basis. This can be seen at household level where the overwhelming majority are principally farmers, yet over half are involved in various non-farm activities such as general trading, retail, hawking, mat making, blacksmithing, cloth weaving, and as religious and herbal healers etc. A few are formal sector employees.

This participation in non-farm activity notwithstanding, operators of non-farm activities do farming too. Forty-eight per cent of non-farm activity operators do wet-season farming for either household consumption, or consumption and sales.

In most situations, men dominate the more lucrative non-farm activities. However, women are actively engaged in non-farm activities that require basic household maintenance skills such as food processing, farm produce preparation contracts (de-husking grains, groundnuts, peeling cassava, drying and harvesting crops etc.), food vending, plaiting, hawking, petty retail sales, and prostitution. Any income generated by females in non-farm activities is

personal unlike the earnings from working on the household farm where all members of the family jointly contribute to the household economy.

Interviews showed that women can only start non-farm activities with the permission of their husbands or fathers. When agreed, the husband may help the wife set up the activity and in return, the woman assists her husband in cash or kind (buying soup ingredients, clothing, paying children's school bills etc.) when the need arises.

Thirty-six per cent of the 50 non-farm activities surveyed were either established before 1979 or between 1980 and 1985, 62 per cent were created between 1986 and 1997 in Nigeria's period of crisis and adjustment..The balance (2%) cannot remember when they started operations. The volume of non-farm activities in Doma increased tremendously during the adjustment period. The hopeless agricultural situation, bad economic conditions and the desire for one's own income are all factors behind the rush to create or expand non-farm activities from 1986 onwards.

Within the non-farm activity sub-sector, time spent at work varies over time. Resources are allocated to maximise benefits. Labour input is here measured by hours spent at work or the intensity of the work period. This is important to income generation.

The men sampled in the household survey had not really increased the time they spent on non-farm activities. Only 19 per cent of them had intensified their time input in the non-farm activities sector and 25 per cent had reduced their time allocation to the sector. Men worked more on farms, particularly their own farms (68%), and still carried out some non-farm activities.

Concerning the surveyed 'operators'²⁷ of non-farm activities, they tended to work between 9 and 12 hours on almost all days of the week regardless of the season. In the non-farm activities, 20 per cent had increased the use of family labour and specifically that of children (18%) since 1992.²⁸ This is not surprising as the cost of hiring labour went up from about N73.00 in 1992 to about N570.00 in 1997.²⁹

On average, non-farm activity operators had increased their hours of work by 11.8 per cent between 1992 and 1997 but this varied across the seasons. The increase for the rainy season was 12.7 per cent, for the harvest period it was only 9.4 per cent and in the dry season, when farming activities were virtually over, it was 17.2 per cent. Marginal as the increases are, they are significant in the sense that non-farm activity participants are working hard to enhance income generation which is itself critical to survival under the prevailing situation.

²⁷ These people were interviewed in the non-farm operators' survey as opposed to the household survey. Their businesses are more established and time-consuming.

²⁸ 1992 marked the peak of the adjustment programme in Nigeria and the Naira was massively devalued against the US dollar.

²⁹ In 1992, about N22 equalled US\$1. In 1997 the naira floated at between N80 to N85 to US\$1..

Rural - Urban Linkage

The major link between Doma and the other towns is essentially that of commerce. Doma has a regional market which services several towns and cities in parts of Nigeria. The market is a source of agricultural produce to towns through the activity of speculators and retail traders.

Further to this, rural non-farm activities are links between urban and rural areas. The data from non-farm activities in Doma demonstrate transfers of capital and labour from urban to rural areas. Among the non-farm activity operators, 16 per cent had been trained in urban areas in diverse fields such as auto mechanics, photographers, storekeepers (provision and chemists), welders and such modern crafts and service provisioners. After training and to avoid the already saturated urban informal sector and the inherent stiff competition there, fresh urban informal sector graduates and indeed those already operating in urban areas moved to rural areas with their businesses. Actually, the survey revealed that 8 per cent of the non-farm activities sampled had been originally established in towns and 2 per cent in neighbouring villages before relocating to Doma. Indeed, 72 per cent of the operators claimed that they had no competitors in their current location. This may be short lived as about half of the operators believed that more businesses had moved to Doma between 1992 and 1997.

Skills training, location and relocation apart, 30 per cent of the operators bought their inputs and articles of trade from towns and cities. Among the non-farm activity operators, 34 per cent nurse the hope of relocating to towns and cities after acquiring enough capital with which to be able to confront the competitive urban market. About 14 per cent of the non-farm activity operators hoping to move gave their current weak capital base as the reason for not having yet done so. The non-farm activity operators who hoped to move back to towns think that business will be better when they do so. As a matter of fact, 36 per cent of the operators claimed they knew some other operators who had relocated to towns in the past five years. The point is that the non-farm activities are also a conduit through which rural capital is mobilised and moved to towns and cities.

The Structure of Non-farm Activities

Sixty per cent of non-farm activities in Doma were operated by those under 40 years of age who had established their businesses in the last 13 years.³⁰ The Ibo presence (14%) in Doma non-farm activities was noticeable. Among household heads, 6 per cent were engaged in wild produce collection, 14 per cent did general trading, 5 per cent did tailoring, 3 per cent were employed in public service and 13 per cent provided transport services. Further to this, household heads reported that other members of their households were engaged in dressmaking (10.7%), retail trade (30.4%), general trading (19.6%) and public service (16.9%). The distribution of respondents by the various non-farm activities in the sample of 100 households is shown in Table 4.

³⁰ Note that the Nigerian economic crisis heightened about 14 years ago and the SAP was put in place about 11 years ago.

Table 4: Non-farm Activities of Household Heads and Members

Activity	Household heads		Other members of household ³¹	
	%	no.	%	no.
Wild fruit collection	6	6	3.6	4
Traditional healer	2	2	3.6	4
Produce processing	1	1	5.4	6
Dressmaking	5	5	10.7	12
Transport service	13	13	5.5	6
Retail trade	8	8	30.4	34
Wholesale trade	1	1	1.8	2
Public servant	3	3	16.9	19
General trading	14	14	19.6	22
Food and beverages	-	-	3.6	4
Hotel and catering	-	-	0.9	1
Modern services	5	5	0.9	1
Carpentry	1	1	0.9	1
Informal sector employee	1	1	-	-

Source: Author's household survey, 1997

It is important to note that household respondents (55%) had once abandoned some non-farm activities which were practised in the Middle Belt (19%), northern Nigeria (2%) and south Nigeria (3%). There is a constant shift between farm and non-farm employment depending on the profitability of the type of activity at any point in time. In other words, once an activity is found to be incapable of supporting operators and dependants it is abandoned for another. Abandoned activities include tailoring, transport services, building and bricklaying, and informal sector employment etc. The rate of non-farm activity abandonment increased from about 1980 when costs of operations began to escalate and competition became stiff within the sector. In agriculture, 8 per cent either abandoned dry-season farming or shifted resources from production of one crop to another depending on its utility and profitability.

Despite this shift of resources, the labour absorption capacity of the non-farm activity sub-sector has continued to grow. Data from the survey of 50 non-farm activities point in this direction. Among these activities the number of operators per activity increased by about 35.6 per cent between 1992 and 1997 and the number of employees and apprentices grew by 7.4 per cent and 11.9 per cent respectively within the same period. The expansion of the sub-sector is

³¹ Other members of the households are wives, children, and other relations or wards resident within the household.

possibly a function of the profit levels. To determine this, the 50 activities surveyed were categorised on the basis of earnings from the activities into low (under N1,000), medium (N2,000-5,000) and high (N5,001 and above). The profit levels are shown in Table 5.

Table 5: Profit Levels by Categories of Activities (1992-1997)

Category of activities	Mean income (1992)	Mean income (1997)	% change
Low	N215.5	N322.2	40.5
Medium	N960,0	N1,870.0	94.8
High	N8,333.3	N8,428.5	1.1

Source: Author's non-farm operators' survey, 1997

From the table it is clear that though profits are lower in the low- and medium-income activities, the rate of profit increase is also highest there. The low- and medium-income activities are easier to set up because of the initial capital requirement. Expansion and employment generation will tend to be within these activities. Twenty-three per cent of those operating the surveyed non-farm activities were people who were motivated to start up the activities due to their potential profitability.

The level of participation of household members in non-farm activities varied across the household economic levels. The data showed that wives (64.3%) more than dependent males (27.7%) and dependent females (2.7%) were engaged in retail, wholesale or various levels of trading which require minimum capital to set up. About 10.7 per cent of the household members were engaged in tailoring, hairdressing and the remainder were scattered through the various sub-sectors of non-farm activity such as carpentry, modern crafts, hotel, food and beverage selling, formal sector, transport services, and provision shops.³²

In the in-depth survey of 40 households, it was found that household members started non-farm activities mainly between 1986 and 1997 (63.2 per cent) as against 19.3 per cent for the period between 1980 and 1985. Since the economic crises, the rate of entrance into non-farm activities has been high. Given that the non-farm activities surveyed were mostly created during the adjustment period and most household members entered these activities within the same period, it appears that the increasing diversification of livelihood strategies is strongly associated with the economic crises and the adoption of adjustment policies.

³² This is the main trade of south-eastern migrants in Doma. The Ibo migrants own provision shops, a photo studio, auto spare parts etc. However two well-stocked provision shops belonging to the indigenes were observed during the survey.

Trading is a major component of non-farm activities in Doma. On market days, people, including operators of *bukateria* or *mama put* (roadside food sellers), drift to the market-place to buy and sell, or provide services that are demanded by those who come to the market.

The distribution of men and women in the various types of activities surveyed is shown in Table 6. The women are more involved in food vending, agricultural produce processing, retail trade and hawking. On the other hand, the males tend to dominate all other activities except food vending, hotels and eating houses and, to some extent, produce processing in which they are in stiff competition with the women.

Table 6: Type of Activity by Sex

Type of activity	Female		Male	
	% in sample	% in activity	% in sample	% in activity
Traditional activities (blacksmith etc.)	0	0	14.6	100
Healers	0	0	4	-
Food vending	22	50	5	50
Produce processing	33	60	5	40
Hotel/food	11	50	2	50
Clothing/fashion	11	17	12	83
Construction	0	0	5	100
Modern services/crafts	0	0	12	100
Transportation	0	0	10	100
Retail/hawking	11	17	12	83
Shopkeeper/wholesaler	0	0	2	100
Formal sector worker	0	0	5	100
Informal sector worker	0	0	2	100
Prostitutes/beggars	11	33	5	67

Source: Author's fieldwork, 1997

Some non-farm activity operators reported abandoning some trades. Before their current activity, some were craftsmen (12%), traders (12%), farmers (24%) and informal sector employees. They gave up these activities for more profitable ones, 26 per cent used their previous activities to gather capital for current activities. In the sample, 43 per cent had had no previous economic activity before setting up their non-farm activity, many being recent school graduates and apprentices who moved directly into setting up their own non-farm activity after their training. Indeed, as indicated by interviews, there is an influx of new entrants into various sectors of non-farm activities mainly due to household pressures, profitability and the ease of

setting up the activity (54%). Household pressure is very significant in this context given that 66 per cent of the non-farm activity operators use their earnings to maintain their households.

Non-farm Activity Capital

A major constraint to new entrants is capital, which is increasingly becoming difficult to mobilise. Many villagers feel embarrassed to start up non-farm activities, seeing it as a public admission of their economic need. For instance using one's motorcycle for public transport is regarded as a sign of poverty and economic degeneration. To facilitate capital accumulation, 44 per cent of the operators farm in Doma strictly to provide for their own consumption. The start-up capital for non-farm activities varies depending on the type of business. The mean capital requirement between 1980 and 1990 was about N18,000.00 but at the time of the research, this had gone up to about N33,300.00. The petty traders need far less than this amount to set up in business. In fact, some set up with anything between N20 to N1,000. Between 1990 and 1992, 28 per cent of the petty traders set up with amounts between N20 and N1,000. By 1997, only 14 per cent were able to set up with such a small amount. There has been either a fall in the range of businesses that small capital could set up, or people are finding it increasingly difficult to gather even that small an amount. Only 16 per cent used farm income, 14 per cent used other non-farm activities and 60 per cent started up with funds from *adashe* (rotating credit), gifts,³³ loans and saved earnings from formal employment.

After setting up, additional capital needed for non-farm activity expansion is derived from the business itself (48%), farming (16%) and such other funds as gifts, loans from spouses, professional colleagues and other non-farm activities. The extent to which funds generated in either farm activities or non-farm activities are invested across the activities is not high. Development and expansion of either largely depends on each activity generating enough surplus on its own to be reinvested.

Links between Agriculture and Non-farm Activities

Non-farm activities and farm activities have complex links. The farmer does not produce all his needs, for example farm implements, housing, baskets, clothing and personal services. Similarly, the non-farm activity operator does not produce all his/her own food and equipment (Uchendu 1975). Both activities are possible sources of cross-investment to establish or expand agriculture and non-farm activities. The linkage can be in the form of capital flow between the sectors, forward, backward and consumption linkages (Haggblade *et al.* 1988). Agricultural inputs like fertiliser, labour and land may be purchased with funds generated through the sale of agricultural produce (65%) and the sale of livestock (5.7%). In the non-farm activity sample, earnings to fund agriculture from agricultural labour and other non-farm activities were used by one out of fifty and one out of every ten respectively. It is crucial to note that income from

³³ Females and dependants use *adashe* and gifts as their main sources of start-up capital. Parents tend to set up children in 'going' and haircutting salon businesses at the end of their secondary school education.

agriculture tended to be reinvested in farm activities. Indeed, to own and maintain livestock heavily depended on farm income as livestock feeds were bought with farm income. In all, 58 per cent of respondents used proceeds from agriculture to buy livestock feeds.

The survey evidence suggests that the capital flow between farm and non-farm sectors was relatively low. However, farmers' demands for other goods and services are the basis for the growth of non-farm activities in Doma. Farmers' demands for clothing, prepared meals and snacks, hoes and cutlasses, medicine, provisions, shoe and other household equipment repairs, hair cuts, transport services, among many others, create a market for non-farm activities to thrive. Farm produce provides a basis for the operation of certain non-farm activities. Proceeds from farm produce processing and marketing³⁴ are dependent on farm activities. Agricultural expansion is a prerequisite for the growth of non-farm activities.

Socio-economic Tendencies and Development Directions

Income Sources

Within households and among both sexes, agriculture composed of wet- and dry-season farming and animal or poultry keeping remains a major source of income. More than half of the husbands, dependants and males in the households earned their income from the farm. Yet, men's incomes from non-farm activities contributed over 45 per cent of their total earnings.

On the other hand, over 80 per cent of incomes earned by wives and females came from non-farm activities. With the economic crunch, females were setting up various forms of income-generating activities to be able to maintain themselves and assist their husbands. The structure of the economy and incomes in Doma is on a gradual drift from chiefly agricultural to a combination of agriculture and other non-farm activities.

The total income of all respondents from the various sectors across the seasons is shown in Table 7. The aggregate income is the gross income for each of the social categories while the mean income is the average of the gross income for the groups. Total income represents the gross income from all sources all year round.

Earnings from wet-season farming were the major source of income in Doma. However, for every Naira earned on the farm during the rains, N0.70 was earned in the non-farm activity sector. There was stiff competition between agricultural and non-agricultural incomes in the area. Generally, dry-season farming and livestock farming were insignificant sources of income in the area. Both wet- and dry-season incomes represent crops sold in the various seasons.

³⁴ Related to produce marketing is the development of the numerous produce warehouses which are rented out to many middlemen and retail traders particularly women.

Table 7: Mean NFA Income as a Proportion of Mean Total Income of Social Categories

Groups by level of:	Source	
	Agriculture (%)	NFA (%)
<i>Agricultural production</i>		
Low	37.0	63.0
Medium	53.0	47.0
High	43.0	57.0
<i>Sex</i>		
Female	16.0	84.0
Male	62.2	37.8
<i>Household status</i>		
Dependant	52.3	47.7
Husband	78.1	21.9
Wife	11.1	88.9
<i>Land-holding strata</i>		
No land	25.8	74.2
1-5 ha	63.3	36.7
5-10 ha	70.7	29.3
Over 10 ha	80.7	19.5

Source: Author's household survey, 1997

Medium-level crop producers earned a substantial part of their income during the wet season, possibly because they sold quickly on crop maturity and harvest compared to high-level crop producers whose income was higher during the dry season and was based more on livestock sales. The low-crop producers received a substantial part of their income from non-farm activities. The women generally derived their income from non-farm activities with little income coming from wet-season activities and livestock sales. At the household level, heads have a far greater income than their dependants and wives across the seasons. Dependants earned more during the wet season and from the sale of livestock and non-farm activities. Wives had very little income coming from seasonal activities but generated income chiefly from non-farm activities.

The respondents were reclassified according to land holding to examine how the issue of income generation was related. The classes range from those without land to those with over ten hectares of land. Across the seasons and activities, those with land holdings of about 5-10 ha had more income from wet-season non-farm activities and overall income. On the other hand, respondents with less than 5 ha derived more income from livestock sales. It was expected that

those with little or no land would go into non-farm activities and thereby have a greater income from that sector. This was indeed confirmed when incomes earned by the various categories from the sectors were compared.

In the sample, women, the low agricultural producer group, and the landless earned higher proportions of their income from non-farm activities than other categories (Table 7). For instance, the landless class derive 74 per cent of their income from non-farm activities. In the same vein, small agricultural producers earned 63 per cent of their income from non-farm activities. Large-scale agricultural producers also earned income from non-farm activities. However, the influx of the poor and landless into this area was greater and so they earned a higher percentage of their income from this sector.

All this has to do with access to land and the ability to cope with farming costs. Male heads of households derived their incomes principally from agricultural activities compared to their dependants and women who generated more income from non-farm activities. Naturally the more land one has, the higher one's ability to produce and earn income from land, at least theoretically.

Social Networks

Social networks provide support systems for individuals in social and economic distress or need. Associational relationships were not significant in Doma. On average, 13.3 per cent of the sample were members of various unions and associations. Memberships were predominantly in rotating credit groups (25%), agricultural cooperatives (36%), community development (15%), youth groups (11%) and religious associations (13%).

Among those who were members, about a third (26.7%) joined a network long before 1979. A further aggregation of the data shows that a substantial proportion, 73.3 per cent, joined an association between 1980 and 1997. Indeed, many (42.6%) joined between 1986 and 1997 at the height of the economic depression when adjustment policies were being most felt by the people. Though a few were currently joining associations, some were also quitting their associational ties. Essentially, people were abandoning credit groups and agricultural cooperatives. This was not the case before 1986. It was observed that 21.7 per cent left unions between 1986 - 1991, and many more (69.5 per cent) between 1992 and 1997.

Table 8: State of Social Commitments among Respondents (N=100)

Network	Decrease (%)	Increase (%)	No change (%)
Visiting relations in town	46	4	13
Visiting relations in villages	38	42	20
Attending ceremonies	37	51	12
Visiting patrons	40	49	11
Gifts to people	40	49	11
Others	12	2	86

Source: Author's fieldwork, 1997

The number of people leaving associations was low and so was the number of people joining. This may be attributed to individuals' inability to meet resource commitments to organisations. Resources were better conserved for household production and consumption demands. People were not dependent on networks for household and production support. Generally, individuals tended to look to their families and households when mobilising resources such as labour for farm and non-farm production to combat the impact of SAPs. But some interdependence was to be found. Almost 40 per cent of the sample had reduced visits to relatives in towns and villages, to patrons and to other people, and attended ceremonies such as naming occasions less frequently. However, about 50 per cent still gave gifts to people, visited patrons and attended ceremonies. This may be due to expected gains in various forms.

Level of Consumption and Welfare

Within the 100 surveyed households, there seems to have been a deterioration in living conditions. In the past five years, 1992-1997, about a third of the sample had cut expenditure on various items (Table 9). People had reduced their consumption of meat (49%), eggs and bread (73%), rice (60%), and clothing (50%). Indeed, there were cuts in expenditure in the areas of household fuel, health, transport, agricultural inputs (including labour hiring and fertiliser), assistance to relatives, religious payments and other such expenditures. Central to these cuts is the general rise in prices due to changes in macroeconomic policies regarding deregulation, commercialisation and privatisation.

Table 9: Changes in Respondents' Level of Consumption (N = 100)

Item	Decrease (%)	Increase (%)	No change (%)
Staple food	22	72	3
Meat	49	43	8
Eggs/tea	73	18	9
Rice	60	32	8
Oil	37	48	15
Fuel	37	25	43
Clothing	50	38	12
Transport	45	29	26
Health	16	75	9
Education	19	59	22
Agricultural inputs	32	52	16
Agricultural wage labour	27	38	35
NFA inputs	30	11	59
NFA labour	33	3	64
Assistance to relations	39	27	34
Religious payments	37	16	45

Source: Author's household survey, 1997

Given the prevailing economic situation, individuals were spending a large part of their income (about 68%) on food items. In all the households surveyed, food purchases had increased since 1992. The main sources of funds for food purchases were crop sales (60%) and livestock sales (8%). The overall contribution of non-farm activities in this respect appeared to be insignificant. One may infer from this that agricultural production was subsistence-oriented and provided food for the household. The food supply of rural households was mainly dependent on agricultural production. It may, however, be observed that accounts were not kept of earnings and expenditure from non-farm activities and people may therefore not have been conscious of their contribution to the household food supply, especially since non-farm income did not arrive in large sums as in the case of crop sales. It

was impossible for respondents to estimate how much they spent on food purchases and other household needs using income earned from non-farm activities.

Agricultural Potential and Occupational Preference

The Middle Belt is known for its agricultural economy despite its poor soils. In the current economic climate, what are the possible chances of agricultural development? To this end, issues of agricultural constraints and potentials were raised with respondents. In the sample, 79 per cent indicated that agriculture has great potential in the area given a stimulating socio-economic and policy environment. The reasons advanced by respondents as a stimuli for agricultural development included the possibility to clear new farm land (16%), the existence of new and cheap labour entrants into farming (11%), availability of the main source of food (23%), new sources of income (11%), and increased production of marketable crops (6%).

There are constraints too, as admitted by 69 per cent of the respondents. All the constraints identified had to do with the land, soil conditions and the ecology. Poor soil fertility and pests were listed as the major problems. In the sample, 43 per cent indicated soil conditions and pests as constraints, 20 per cent claimed the procurement of inputs was a handicap and 7 per cent indicated that infrastructural conditions (roads, marketing, storage etc.) were the major problems. On the whole, only a few indicated access to land as a problem. No respondent mentioned labour as a problem. Soil fertility was a major constraint in a situation where farm inputs particularly fertiliser were expensive and often unavailable.

All these factors notwithstanding, 66 per cent of the sample wished to pursue only agriculture. This figure was 10 per cent lower than those wishing to set up non-farm activities. Nearly half, 44 per cent, would prefer a combination of both farm and non-farm activities in the village.

Rural Households: Going in Two Directions

The examination of the livelihoods of the people of Doma in Nigeria's Middle Belt points to certain directions in labour movement and the allocation of resources to various income-generating activities. The highlights of the findings can be itemised as follows:

- Indigene rural dwellers and the few, mainly Ibo, migrants, are increasingly setting up non-farm activities. Non-farm activities have grown in the past 10-15 years particularly among women and younger household members. More women are starting activities in areas where they have traditional female skills.
- Rural youth are involved in minimal farming and maximum non-farm activities. Indeed, some families encourage some members to set up non-farm activities, while others go to school and a further group remains on the farm. This may be a deliberate strategy to reduce the risks of engaging in only one activity, namely farming.

- The farm environment is changing quickly. Soil fertility has deteriorated to a point where farming is only possible if fertiliser is intensively used or if virgin forest is cleared. Virgin forest has become very distant and fertiliser has become difficult to find and buy. There is alarming destruction of the forest in the region.
- Older generations in the community have more land and higher farm outputs. The younger ones work more on land that they do not own, produce less, and earn less from agriculture. It was also found that women have far smaller farm sizes than both household heads and male dependants.
- All household members have their roles on the farm and to sustain farm labour, people tend to have large families. Schooling, however, takes some labour out of the household labour pool. This does not seem, however, to have created problems of labour supply in Doma.
- Individuals are shifting more from household economic activities in terms of participation to their own economic activities in the sense of having increased the time spent on these relative to household activities. One sees a tendency towards individual accumulation and therefore greater economic empowerment of individuals, rather than households, as production units.
- The people are predominantly wet-season farmers and have the dry season to undertake other non-farm activities.
- It was observed that over two-thirds of crops produced are sold and most of the proceeds go into food purchases.
- Livestock keeping is not significant in the life of the people.
- The apparent scarcity of fertiliser is inducing farmers to shift from crops requiring its application (maize, millet, etc.) to crops that do not require it (sesame seeds, groundnuts, cassava etc.). The lack of this basic farm input increases the risks of farming, in the sense of yields and in terms of food security.
- Among non-farm activity operators, time input per day has increased, albeit marginally, over the past five years.
- There is a tendency for urban-trained non-farm activity operators to establish or relocate businesses to rural areas and move back to urban areas when they have gathered enough capital to cope with the competition in urban areas.
- The dominant non-farm activities in Doma and possibly in the Middle Belt are trading, food processing, public transport operations and food vending.

- Setting up non-farm activities is becoming increasingly difficult. The capital requirement is generally on the rise and the degree to which people use any farm income to establish a new enterprise is low. The females, who are more involved in non-farm activities than farming, set up with funds from rotating credit schemes or with money acquired as gifts.
- Generally, the men generate more income from agriculture than the women. A substantial percentage of female income is generated from non-farm activities.
- Social networking as uncertainty management is not significant in Doma. But there are indications that people are trying to sustain primary relations.
- There are significant cuts in welfare expenditure except for those on food and health, both of which have increased tremendously.
- Many may want to farm but soil fertility, the availability of capital and fertiliser, and the distance to farms are inhibiting factors.

Policy Implications

Given all these factors, the policy objective is to enhance productivity in both farm and non-farm activities so as to guarantee food supply and improve the livelihood conditions of rural dwellers. To this end, the need to develop farm and non-farm activities cannot be over-emphasised. For the attainment of these goals, there is the need to address the following points.

- Given the very high numbers of people involved in trading, and food and agricultural produce processing in rural areas, there are indications that opportunities for multiple livelihoods and diversification are very limited. Continuous crowding in these sub-sectors will lead to excessive competition. The overcrowding of this sector may be tied to the limited skills of the people. There is, therefore, the need to organise skills training for rural dwellers in certain activities, including basic bookkeeping, to encourage the development of a wide range of non-farm activities.
- To be able to achieve this, it is important to organise rural communities in such a way that they are active participants in their own affairs. In this context, government and traditional institutions are irrelevant. Herein lies the relevance of community-based organisations and non-governmental agencies operating within such communities. NGOs and CBOs should be strengthened to support communities and provide for the teaching of new skills. The skills training should be particularly geared towards women so that their non-farm

activities can transcend domestic skills, and youths who have virtually no skills on leaving school and cannot fit into farming.

- Capital is a major constraint to farmers and non-farm activity operators. It might be necessary to develop the capacity of CBOs and NGOs to the level that they can mobilise, disburse and manage loans for both farm and non-farm activities.
- It is necessary to develop agriculture to keep people on farms and protect the environment. To this end, it is imperative to:
 - i) appreciate the problem of soil fertility *vis-à-vis* lack of fertiliser. Making fertiliser and other inputs available is an enormous task and as a solution may not be feasible in the current situation. Instead, the use of organic manure should be encouraged and farmers could even be taught how to develop their own manure. Tied to this is the encouragement that is required for farmers to actually keep small animals since their droppings could help minimise the problem of fertiliser availability, and enhance farmers' incomes.
 - ii) work with farmers on matters of soil conservation and environmental preservation. Acquainting them with basic skills on soil management may help to reduce incursions into the virgin forest and the distance to farms. In doing this, indigenous environmental management knowledge should not be ignored.
- It is important to improve agricultural infrastructure, transport, and general production technology to sustain an interest in agriculture, reduce food insecurity, and provide the basis for an expansion of non-farm activities.

Livelihoods in rural areas are apparently diversifying with a combination of farm and non-farm activities. The development of an enabling environment for the growth and expansion of these sectors is the foreseeable path to rural development in Nigeria. No meaningful development will be attained by relying on farms alone.

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