

# **Heavy Clouds But No Rain**

**Agricultural Growth Theories and Peasant Strategies  
on The Mossi Plateau, Burkina Faso**

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## Abstract

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The thesis discusses different theories about agricultural growth and their applicability in Sub-Saharan Africa. Starting in a debate about lack of expected results from economic reform programmes, the study goes on to describe the situation prevailing on the Mossi Plateau of central Burkina Faso. This area has been selected as a case where agricultural reforms have been implemented properly, and hence positive results from liberalisation in terms of agricultural growth should be expected. In spite of this, what is found is an increasing level of income diversification, combined with the upholding of self-subsistence farming with traditional methods. The factor explaining the prevalence of income diversification is the level of reluctance to change. Underlying this reluctance to change are four indigenous institutions: the upholding of social relationships, the household as the basic production unit, customary land tenure and the upholding of local power structures.

These four institutions are also found to influence the level of economic dynamism more broadly. Hence, they determine the scope for agricultural growth. However, some growth is taking place first and foremost in the fields of vegetable gardening, cotton cultivation and cattle breeding. In these areas change is possible because it can take place without challenging the identity of Mossi peasantries. Some members of households are also able to be more dynamic than others since they have roles that are freer.

The indigenous institutions that guide Mossi economic behaviour are rules that are constitutive, that is, the upholding of them contribute to create meaning for those who follow them. In this way, they belong to logic of appropriateness. Based on these findings neoclassic as well as New Institutional Economic theories are criticised, as are other theories that indirectly make the assumption that agricultural growth is hindered or held back by an irrelevant institutional pattern. In order to make sense, theories about agricultural growth in Sub-Saharan Africa need to take indigenous institutions into consideration and give them a proper role.

Keywords: economic theory, agricultural growth, income diversification, institutions, economic reform, Mossi peasants, land tenure.

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To Amanda and Ebba

“I think Joseph was a diversifying farmer. Had he been just a carpenter, then the parables of Jesus would not have been so agrarian...”

Maria Verneresson, August 2003

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## Introduction

The starting point for this study was the longstanding debate about the effectiveness of structural adjustment programmes in Sub-Saharan African economies. After some 20 years of reform programme implementation, accompanied by debates about results and debates about the possibilities of measuring results, some kind of consensus has emerged around these programmes. The generally held view is that programme results have emerged more slowly than expected. Since results have lagged behind expectations, several attempts have been made at broadening the perspective on economic reforms. At first, during the 1980s, the discussion was purely economic, and different economic perspectives were presented in order to explain the evolution. Later, political perspectives were brought in. These primarily concerned the extent to which reforms had been implemented, and references were made to different group interests that could derail reform processes, or cause “slippage” in the implementation.

When the debate on economic reforms came to include more political perspectives, the importance of institutions was also increasingly emphasised. Institutions, seen as “rules of the game”, set the stage for economic activities. An understanding of how institutions function and may be changed is essential for the understanding of how an economy might change or develop. This study is part of a tradition that seeks to broaden economic analysis with tools that come from different disciplines. It focuses on the role of institutions. However, in the countries studied here the most relevant institutions turn out to be indigenous and non-formal in character. When the focus turns to these local phenomena it should be kept in mind that the wider setting of the study is still the larger debate about the relevance of economic reform programmes in Sub-Saharan Africa.

When economic analysis is brought closer to people cultural factors become important for the analysis, in addition to the already mentioned economic and political factors. It is when local realities start to count that a thorough cultural understanding becomes unavoidable. A more recent development is also that the debate about economic reforms in Sub-Saharan Africa has come to include cultural perspectives. The relevance of such a widening of the debate became clear to me when during the 1990s I had the opportunity to discuss and study economic reform programmes aimed at African economies with responsible and involved staff at the World Bank, while at the same time I could discuss the content and meaning of the programmes with local citizens in the countries concerned. The perspectives differed substantially between these two levels. Yet, there is a need for a functioning interplay between the levels, and a mutual understanding between actors at the two levels, in order for the macro reform programmes to be successful. Without a change in the economic behaviour of micro level actors no substantial change will take place at the macro level. Without a thorough understanding of micro level dynamics no relevant macro policies may be developed.

Hence, another underlying perspective in the study has been differences observed between actors at the macro level, as compared to actors at the micro level. In particular, the differences in perspectives between these levels have driven my

search for a deepened understanding of the micro economic underpinnings of economic reform programmes in Sub-Saharan Africa.

The focus of the study came to be the agricultural sector, since this is the most important economic sector of all in a vast majority of Sub-Saharan countries. Developments in the agricultural sector are of great importance for the rest of the economy, as well as for the majority of the people in these countries. Hence, such a delimitation was easy to make. Furthermore, the idea has been to study countries where slippage in the reform process has not occurred. Through such a choice, slippage may be excluded as an explaining factor should the outcome of reforms prove to be negative. The choice came to fall on the West African countries Burkina Faso and Ghana – two countries with a good “track record” when it comes to economic reforms both in general and in agriculture specifically. A review of the state of research in these countries led to the conclusion that this study ought to be concentrated on the Mossi ethnic group living on the central plateau of one of the countries – Burkina Faso. Their behaviour in terms of income diversification based on their peasant form of production came to be key to the broader understanding of their livelihood strategies.

Agriculture in this area is also influenced by factors external to Burkina Faso. Trade issues, foreign debt, international investment patterns, the structure and function of agricultural companies are some of the factors that also influence Mossi peasants. I have, however, chosen to limit my study to factors internal to the Burkinabé economy and to Mossi societies in particular. The relevance of the discussion will hopefully show that this has been a good choice.

Even if it focuses on economic activities, this has come to be a work largely about the search for identity, and about the centrality of norms in society. The search for identity is a very strong force, guiding the behaviour of people in many different walks of life. This is, as will be discussed, also the case when it comes to economic matters. I will argue that the assumption that people act individually, and in an instrumentally rational way, is not correct in this setting. There is a need to understand rationality in a much wider setting, where people need to be seen as communitarian beings, involved in social interplay, rather than as atomistic actors.

The main argument of the study is built up as a chain that runs through the study. It starts out with a discussion on structural adjustment programmes and their effectiveness in agriculture (chapter 1). The aim of this chapter is to describe what has happened in Sub-Saharan Africa in terms of agricultural development during the 1980s and 1990s, and to summarise what could be said about the effects of reform programmes. The description is both general and concentrated on one country, Burkina Faso, in order to cover general as well as more specific aspects. It is argued that the results of these programmes have not been as good as expected, which implies that there is still scope for explaining the lack of success. What may be observed at the same time in countries undertaking reforms is an increasing diversification of income sources away from agriculture. Hence, structural reforms in agriculture are accompanied by increased income diversification, rather than by increased productivity in the sector. This is also a finding that needs to be explained.

It has wisely been argued that studies of adjustment programmes should not attempt to establish any direct causation between reform programmes and social or economic change. Methodological difficulties have proven too great for such approaches. The methodological, as well as the empirical, horizon should rather be shifted towards the study of “adjustment situations” in which a number of reforms as well as a number of semi-independent variables enter the scene (Gibbon and Olukoshi, 1996, p 16). Following such advice, this work will focus on empirical studies on the dynamics taking place in a situation where reform programmes have been implemented.

Hence, the idea of the study is to investigate the dynamics behind this income diversification, while at the same time not losing track of the dynamics influencing agricultural growth more broadly. The two debates are followed simultaneously throughout the study. Furthermore, a central argument is that there are links between the two debates. These links are investigated and discussed in chapter 2, where also different theories are presented. Characteristics of the different positions in the agricultural growth debate are traced and also found in the different positions within the debate about income diversification.

The theories presented in chapter 2 have been chosen because they belong to two influential and relevant traditions: the economic literature on the one hand, and the broader institutional, more sociological, literature on the other. These traditions present contesting views on how to explain agricultural growth. The differences are profound and rest on various assumptions made about human behaviour. Theories on the two sides are chosen in order for them to cover general issues of agricultural growth or development. In addition to this, technical change, the establishment of contracts and the practice of income diversification are aspects dealt with at a lower theoretical level, possibly as sub-theories. These latter additions have been made because such aspects are essential when it comes to the issue of market development, and in order to understand current characteristics of agriculture in Sub-Saharan Africa. These combinations, or systems of theories, need to be taken into consideration when the issue of linking the agricultural growth debate with the income diversification debate is dealt with.

Theories from the economic literature about agricultural growth have been chosen on the basis of their influence in academic debate and development practice. The criteria for selection of theories from the institutional literature are that these theories deal with, and present alternatives to, some of the basic assumptions underlying the economic theories. The ultimate test of relevance is of course if these theories turn out to be useful, in the sense that they actually explain things that may be observed empirically.

In chapter 3 I present my conceptual framework in order for the reader to see on which basis the methodological choices have been made. The methodology is then described and discussed in this chapter. Chapters 4 and 5 provide an explanation as to why peasants on the Mossi Plateau of central Burkina Faso diversify their income sources. The explanation is built on two levels. First, the factor that causes diversification is isolated, then the underlying mechanisms that link this cause with its effect, income diversification, are traced. What emerges is an explanation that

rests on the functioning of four indigenous institutions that guide the productive behaviour of peasants.

As already stated, a central argument of the book claims that something may be said about theories of agricultural growth on the basis of studies of income diversification behaviour. But in order to do that it is not enough to establish links on a theoretical level. It is essential to discern empirical links as well. This is what is attempted at the beginning of chapter 6. In this chapter, the analysis of peasant agriculture on the Mossi Plateau is also extended into the areas where market expansion actually takes place: the cultivation of cotton, the growing of vegetables and the breeding of cattle. Chapter 7 provides an explanation as to why expansion takes place in these particular areas, and why certain categories of people are more likely to be economically dynamic than others. The level of technical change in Mossi peasant agriculture is also studied. Taken together, these sections provide a comprehensive description of the level of change that has taken place, and continues to do so, in agriculture in this area.

By extending the analysis from the issue of income diversification into the area of agricultural growth more generally, I have a basis for discussing theories that have made claims to be valid for the whole of Sub-Saharan Africa. In chapter 8 a discussion follows about which theories have to be refuted, and which theories still hold up. It may already be noted that it is possible, on the basis of a study of one area in one country, to refute a theory, which claims to be valid for an entire continent. However, it is a different task to claim that a theory may be generalised to a larger area on the basis of the empirical material that this study rests on. This distinction will have to be kept in mind when the time comes for conclusions to be drawn.

At this stage it is important to underline that in order for the main argument of the book to hold up, it is essential to find the theoretical and empirical links between the two debates (agricultural growth and income diversification). Another central part of the argument is the classification of different theories. The aspects that are singled out as characteristics of these theories need to be central to the theories in order for us to discuss the relevance of the theories, and ultimately to refute or uphold some of them. It is because of the centrality of these aspects that such issues are already dealt with in chapter 2. The fact that theories are presented before the empirical material is presented in this study does not imply that the empirical investigation has been biased because of any theoretical positioning. It is rather a matter of showing the importance of classifying theories in order for the longer argument of the study to be properly developed.

Fieldwork for this study was carried out over a three-year period during which I lived in Burkina Faso for two years and later returned twice. This made it possible to follow villagers for three consecutive seasons, and therefore to study peasant behaviour during cultivation seasons with very varying results in terms of harvests. Rainfall levels and variability differed widely between these seasons.

When living in Burkina Faso, I also held a part-time position as programme officer at the West Africa office of a Swedish NGO. It is difficult to undertake development research while at the same time representing a structure that finances

development interventions. There are many risks for information bias because of this situation. Hence, I tried very hard to separate my two roles: the subject area of development interventions, which I worked with, was not to be the same as the subject area of my research. The geographical areas where I undertook research were never the same as where I worked with development interventions. And I tried to be very careful about the way I approached people as a researcher: not using equipment that could be linked to the organisation I worked for.

But on the other hand it also turned out to be advantageous to have this combination. My work as programme officer in a development NGO led me to situations I would never have come across in my role as researcher. Suddenly I found myself in the midst of discussions that revealed things about Mossi villages that I would not have understood otherwise. Eventually, I also decided to draw on the knowledge that I acquired this way. The section on power structures in Mossi villages would not have been in the study without this particular experience.

It may be possible to generalise to varying extents the results from a study of peasants from one ethnic group in Burkina Faso. In this context these results will first and foremost be used to discuss theories that claim to be valid for Sub-Saharan Africa. Results from one area of one country may be used to at least refute the all-pervasiveness of such theories, should they prove not to hold up. Furthermore, in this case when a most-likely-case method is used, arguments about generalisation to larger populations may be produced. However, no general statement about the possibility of generalising results can be made beforehand. That will have to be discussed on the way, as the empirical results emerge.

The present study covers wide areas and a number of different debates. It does not pretend to cover all aspects with the same depth. Furthermore, the complexity is enhanced by the fact that the subjects under investigation come from such different fields as economy, sociology, anthropology, political science and religion. However, the basic idea is to bring knowledge from different fields together in order to enhance the understanding of some more general issues. Such an approach is both necessary and the most fruitful one given the issues dealt with. It is in the synthesis of results from different areas that new knowledge might be gained. Hopefully this could contribute to a deepened understanding on the scope for and role of economic reforms in Sub-Saharan Africa.





# 1. A Cultivating Continent

## 1.1 A Reforming Sector

Explanations of agricultural or rural development in Sub-Saharan Africa are commonly based either on neoclassical economic theory or on structural models, which highlight either deteriorating terms of trade or other external factors. The neoclassical tradition has been particularly influential, theoretically as well as in practice. Since the World Bank published the "Berg report" in 1981, a large number of economic reform programmes based on neoclassical analyses have been implemented. This has been done with technical and financial support from the World Bank (World Bank, 1981). The main idea in the Berg report was that an "urban bias", established through government interventions and excessive taxation, particularly in agricultural markets, hindered a rural development that was seen as necessary if African countries were to grow economically. The remedy was a creation of proper markets, free pricing and a halt to government interventions, whereby urban-rural relative prices would correct themselves and the agricultural sector would thrive.

It has, however, been difficult to support such claims empirically. Studies of agricultural supply response in the Third World in general, and in Sub-Saharan Africa in particular, indicate that producers react with increased output as measured per single crop. But an aggregated supply elasticity for agriculture as a sector has been more difficult to establish. This means that it might be that price increases for single crops lead to switching of crops rather than to any overall increase in production (Binswanger, 1990, Platteau, 1990). Such is the picture especially for Sub-Saharan Africa (Schäfer, 1997, p 99-102, Cleaver, 1985, 1997, Schiff and Montenegro, 1997, Mamingi, 1997, Jaeger, 1992, Ogbu and Gbetibouo, 1990, Chhibber, 1989, Fonäs-Sundell, 1987, Bond, 1983, Askari and Cummings, 1977). Other factors, such as infrastructure, human development, existence of rural organisations, market services, a proactive public sector involvement, government expenditures and population growth etc. are more significant than price and exchange rate variations in explaining performance. The overall conclusion is that government interventions aimed at improved infrastructure, improved education, expanded irrigation etc. are more important than prices as explanatory factors (Schäfer, 1997, p 100, 102).

Studies of aggregate response to policy changes give a mixed result. Jaeger (1992) and Faini (1992) find a positive relationship between economic reforms and growth of agricultural value added. However, Seppälä (1997) does not find any significant effect of aggregate marketing reforms on food production (Kherallah et al, 2000, p 2.29, 4.37).

Researchers at IFPRI (International Food Policy Research Institute) draw the following conclusion after having studied the results of a number of studies: "In sum, it appears that the relationship between market reform and supply response in Sub-Saharan Africa is tenuous, at least in the relatively short time span following full liberalization" (Ibid, p 4.37).

McKay et al argue that previous supply elasticity studies have been based on weak econometric methods and also subject to the “Lucas critique”. This means that the use of data gathered under conditions different from the current situation render comparisons impossible. The old data is “impregnated” with a different agricultural policy regime, and cannot therefore be used for establishing unbiased trends (McKay et al, 1999, p 112). By a new method, called the co-integration approach, combined with error correction models more reliable results are obtained, they argue. By applying these methods to Tanzania during the late 1980s they find significantly higher supply responses: 0.39 in the short run, and 0.92 in the longer run (McKay et al 1997, McKay et al, 1999, p 120). But even this study has been questioned since it is based on official GDP statistics, which are deemed to be unrealistically high, and inconsistent with production data (World Bank 1998).

The World Bank has since the early 1980s been lending money to programmes aimed at macroeconomic reforms (structural adjustment lending), and agricultural sector reforms (agricultural sector adjustment lending, AGSECAL). When evaluating 48 of these AGSECALs in October 1997, the Operations Evaluation Department, OED, of the World Bank, concluded that results have been very limited. “...impact on output has been small in most completed AGSECALs”. This result was, according to OED, expected since AGSECALs approved before 1991 were of a kind that “did not come to grips with basic policy constraints, or the reforms were not sustained, so that their growth impact was limited” (Meerman, 1997, p 2, 29-42).

The AGSECALs that were agreed upon before 1991 were not fully market oriented because they aimed at making the existing public marketing boards and other public institutions more efficient. The post 1991 programmes are, however, aimed at eliminating price controls and privatising inefficient public enterprises. Since agricultural reforms take place in a larger setting, since 1991 the World Bank has also made overall macroeconomic balance a precondition for approval of an AGSECAL.

Even with these changes, the OED finds it methodologically difficult to measure effects from the AGSECALs. The OED thus tested whether the programmes have been internally consistent, and consistent with their underlying theoretical basis, before discussing whether the theoretical basis had proven right in other empirical studies. Such an approach may be useful in countries where basic institutions are market supportive in a conventional sense. But things may be different in Sub-Saharan Africa, a possibility that is strengthened by the fact that the empirical material the OED refers to mainly concerns countries outside this region.

Hence, it is an open question whether market oriented agricultural sector reforms cause the expected outcomes in Sub-Saharan Africa or not. The OED evaluation does not produce enough insights. This conclusion comes in a situation of several years of severe problems in the implementation of economic reforms, and less than satisfying results of reforms implemented. Hence, the search for alternative explanations of the economic behaviour of African peasants has intensified among academics. The analytical basis for World Bank reform programmes has undergone major changes, and in addition to this, explanations of other kinds have gained increased attention.

Underlying the debate on the effectiveness of economic policy reforms are differing views on the role of the state. During the 1960s and 1970s the dominant thinking was that the state ought to be the major actor in the “modernisation” of developing countries. Through planned interventions, and in close collaboration with external development bodies, governments were supposed to promote processes that would result in economic growth and poverty reduction. In the agricultural sector, this meant diffusion of modern technologies such as chemicals, hybrid seeds and mechanisation, as well as the provision of state-controlled organisations for marketing and input provision. Regulation of trade and prices also constituted part of the package (Ponte, 2002, p 2).

However, para-statal marketing boards and state-led cooperatives incurred increasing costs that translated into heavy financial burdens for government budgets. Partly because of un-viable systems of pan-territorial pricing, (systems through which producers in different regions of a country with widely different transportation costs obtained the same input and production prices) partly because of corruption, these organisations became increasingly difficult to sustain. They were also accused of having poor transportation capacity, a lack of coordination, inadequate storage facilities and providing payments too late (Eriksson Skoog, 1999, Ponte, 2002).

In the early 1980s, a systemic shift was initiated, as already mentioned. The publication of the Berg report (World Bank, 1981) marked a new ideological orientation, and the subsequent introduction of structural adjustment programmes marked a new orientation in practice. With the aim of promoting a sound market development, conditions were introduced by the World Bank and the International Monetary Fund, IMF, demanding macro economic stabilisation, the reallocation of productive resources to agriculture and other productive areas and institutional changes promoting market solutions.

The debate that followed the introduction of structural adjustment programmes has been vivid and extremely vast. It has included differing statements on results (Cornia et al, 1987, Corbo and Rojas, 1991, Cornia, 1991, Elbadawi et al 1992, Bourguignon and Morrisson, 1992, Stewart, 1992, Cornia et al, 1992, Mosley and Weeks, 1993, World Bank, 1994, Jaffee and Morton, 1995, Mosley et al, 1995) as well as methodology and the possibility of making inferences about reform effects (Demery, 1993, Thorbecke and Koné, 1995, Gibbon and Olukoshi, 1996). The debate took a new turn in the early 1990s, when institutional economics became increasingly influential in development economics (World Bank, 1994, etc). The more extreme free market positions of the early and mid-1980s became tempered with more nuanced views on the role of the state. At the beginning of the 21st century three major positions emerge in this debate:

- The “conventional wisdom” position that claims structural adjustment programmes to have been correctly designed, but not properly implemented by reluctant governments. The state should, according to this view, limit itself to basic functions such as the provisioning of basic services (education and health care) and the upholding of property rights

and contracts (Devarajan et al, 2001, p 3ff, OED, 1998, p 103f, 106, World Bank, 1994, 1989, p 89ff, Jaeger, 1991, p 43ff).

- The “emerging orthodoxy” position, which claims a somewhat more activist role for the state. This “circumscribed” activism could mean that the state facilitates the emergence of specific institutions in order to actively promote market development. The state should be “coaching” actors, and providing arenas for them to fulfil their roles as market agents (Kappel, 2003, Mkandawire and Soludo, 2003, *Emerging Markets Economics*, 2001, Berthélémy, 1995, Lafay and Lecaillon, 1993, Cornia et al, 1992, p 174ff).
- The “critical” position that still sees a more active role for the state. In areas and regions where private sector involvement is bound by structural limits, the withdrawal of the state has been too quick. Alternative forms of public interventions should be considered in these setting, it is argued (Ponte, 2002, p 4, Bryceson and Jamal, 1997, p 251ff, Sandbrook, 1993, p 77f).

After the institutional turn of the debate, it seems as if it is the latter two positions that are becoming more influential. Much of the current discussion centres on the settings and rules in which markets operate. Hence, this study will have to give careful consideration to the role of institutions.

### *1.1.1 The Context and Timing of Agricultural Liberalisation*

The changing perceptions of the role of the state implied that markets were given more important roles to play. With the arrival of the market paradigm in the early 1980s, a progressive dismantling of the agricultural marketing, processing and export systems ensued. The process first got started with food crops market liberalisation from the mid-1980s into the 1990s, while export crops liberalisation only came about from the early 1990s onwards (Gibbon et al., 1993).

The 1990s have, at the same time, been characterised by international negotiations on agricultural trade, within the GATT and later the World Trade Organisation, WTO. Of particular importance is the WTO Agreement on Agriculture (AoA), concluded under the GATT Uruguay Round in 1994. Implementation began in 1995 and reforms are to be concluded within a ten-year period for developing countries. New negotiations for further agricultural liberalisation got started in early 2000, under article 20 of the AoA. These negotiations were incorporated into the general WTO trade negotiations in 2001 and should therefore be concluded before January 1st, 2005 (<http://www.wto.org>). Of great importance for developing countries are also the Common Agricultural Policy of the European Union, EU, and the Cotonou trade agreement between the ACP (Africa, Caribbean and the Pacific) countries and the EU.

These recent and ongoing trade negotiations will probably have mixed effects for Sub-Saharan African countries. The WTO AoA, through its tariff rate quotas and tariff reductions, will increase imports, but also open up somewhat greater opportunities for Sub-Saharan African exports. At the same time, the Cotonou

agreement will make the preferential export treatment of ACP countries relatively less beneficial to them. The net effect of these simultaneous moves is hard to predict. The reductions of direct support to agricultural production in the developed world will probably have effects on the imports to Sub-Saharan Africa – which in turn will have different consequences for net importers and net exporters. The final consequences remain to be seen, but there are reasons to believe that the weak position that Sub-Saharan African countries have in these negotiations will work to their detriment.

National agricultural market reforms in Sub-Saharan Africa were, during the 1990s, undertaken in this international context of re-regulation and liberalisation. Reforms focussed on: (i) withdrawal of the state from production, pricing and marketing activities; (ii) relaxed regulations on private trade. In some countries liberalisation of export crop purchasing took place while, however, export functions remained under state control (Shepard and Farolfi, 1999, Kherallah et al, 2000, p 4.1). Regarding food crops, both features (i) and (ii) have been prevalent. Exceptions to this pattern have been the management of strategic grain reserves and limitations of external trade in food crops in a number of east and southern African countries (Jayne and Jones, 1997).

The extent and nature of reforms have varied largely, depending on what government intervention looked like prior to reform. Some countries in West Africa, like Ghana, Cameroon, Niger and the Gambia, had relatively open food markets with limited parastatal involvements, and were not dependent on single food crops. In such countries liberalisation was easier to implement since it did not represent any severe threat to food security (Alderman and Shively, 1996). In some countries in east and southern Africa, like Tanzania and Malawi, which are dependent on single crops, the states used to intervene heavily in food markets. Here reforms have been slower, and subject to scepticism concerning the ability of the private sector to ensure food security. In a third category of countries, where states were involved in direct food distribution through rationing, like in Madagascar, Mozambique or Ethiopia, reforms have been characterised by the inclusion of former parallel markets (Kherallah et al, 2000, p 4.3, Sahn et al 1997). Another source of difference in the formulation of reforms has been the extent to which states prior to reforms were supporting agriculture through subsidies or were discriminating against agriculture.

### *1.1.2 Food Market Reforms*

State controls on food crops such as maize and paddy/rice and other cereals were widespread in Sub-Saharan Africa prior to liberalisation. Apart from the introduction of the market based paradigm, other factors that fuelled liberalisation were the escalation of the costs of marketing boards due to pan-territorial pricing, inefficiencies and corruption and the growing role of the parallel, unofficial and illegal marketing system (Maliyamkono and Bagachwa, 1990, Gibbon et al., 1993, Kheralla et al, 2000, Ponte, 2002).

Food marketing reforms included the removal of subsidies, price liberalisation, quantity and geographical restrictions on trade and the opening of domestic trade

and processing to the private sector. Marketing boards have in general lost their marketing function, with information dissemination and some regulatory functions remaining.

Devaluations have led to higher costs for imported input goods, higher prices on imported food and potentially higher domestic food prices. At the same time, trade regimes have opened significantly through reduced tariff levels and removed import barriers (Kherallah et al, p 4.5). However, the reforms in the food crop sector did not lead to a general increase in real producer prices. Only in three out of 14 investigated countries did Townsend (1999) find substantial and continuing increases. One of the few countries that have seen producer price increases is Burkina Faso (Bassolé, 2000, p 129). Overall, food production performed better in West Africa than in East and Southern Africa. This is held to be due to a longer history of liberal food markets, a more thorough devaluation of the currency and also to increased use of fertilizer (Kherallah et al, 2000, p 2.31ff). In most East and Southern Africa countries, real producer prices for food crops declined, due to the high price levels set by the governments in the 1970s and 1980s in order to attain food self-sufficiency. However, wide discrepancies have emerged within countries. In remote areas not served by transport infrastructure, producer price declines have been dramatic following market liberalisation.

The main beneficiaries of market liberalisation of food crops in most countries have been the consumers, since the real prices of grain and grain meals have declined since the inception of the reforms. In Burkina Faso the beneficiaries have rather been the producers (Bassolé, 2000, p 179). The private sector responded rapidly to dominate both trading and processing of food crops, leading to high levels of competition and increased efficiency in these activities. This has led to a downward pressure on profit margins that has counteracted the negative effects of elimination of consumption subsidies (Jayne and Jones, 1997, Kherallah et al, 2000, p 4.20). However, in most countries market prices have remained highly volatile. Variations have often been in higher than 40 percent over the year (Kherallah et al, 2000, p 4.21)

The emergence of private actors in trading has however led to difficulties in overcoming high transportation and transaction costs. In order to circumvent the high transaction costs for obtaining market information in rural areas many traders tend to rely on social, ethnic-based networks. Moreover, these traders often act outside formal regulation and many of them have difficulties in accessing financial services. Due to limited access to financial services and high transaction costs, the food crop sector remains risky, personalised and cash-based, with limited investment by private traders in transport and storage (Kherallah et al, 2000, p 4.22, Fafchamps and Minten, 1999). A further problem is to establish the trust needed to develop trade over long distances, where it becomes necessary to deal with persons that are more or less unknown.

A positive result of reforms in food markets is a reduction in marketing margins, that is, the spread between producer and consumer prices. This is primarily due to a reduction in consumer prices. Furthermore, markets have moved towards being more integrated, which implies that prices are transmitted from one market to

another more efficiently. This is particularly the case with urban markets (Kherallah et al, 2000, p 4.21).

Food market liberalisation had important impacts on the regional pattern and composition of food production. For instance in Tanzania, the more remote areas such as Rukwa, Ruvuma, Mbeya and Iringa, had during the pre-liberalisation period provided the major share of maize for the main urban markets (Rasmussen, 1986). With liberalisation these areas lost their share of the national grain market to the benefit of areas closer to Dar es Salaam or which had better transport infrastructure (World Bank, 1994). This pattern was replicated in most countries with the advent of private traders, especially in countries heavily dependent on one single crop. However, in a country like Burkina Faso the regional production pattern was not much changed. Areas dominated by subsistence farming continued to produce less than their consumption, while those areas producing a surplus retained their position.

What followed with liberalisation as well was a reduction of co-operative crop buying. For instance in two rural districts in Tanzania (Singida and Morogoro), the share of private traders' crop buying increased rapidly between 1986/87 and 1994/95 whereas co-operative crop purchases went down drastically. In Morogoro district, co-operatives had disappeared from crop buying altogether by the mid-1990s, whereas in the more remote area Songea, its share of total crop purchases had declined from about 75 to 44 per cent between 1986/87 and 1994/95 (Ponte, 2002). The collapse of the co-operative movement is a general trend throughout those parts of Sub-Saharan Africa where it used to fulfil important roles. This has had important implications for community co-operation, leaving space for new initiatives. In some areas, new responses for co-operation have emerged from below, but in most rural areas, the demise of the co-operative movement has led to an institutional vacuum. In the Sahel region of West Africa, crop buying and input provisioning were taken care of by parastatal structures. When these were gradually withdrawn, private traders took on increasingly important roles. A number of independent peasant organisations had emerged mainly in response to the wide-spread droughts that appeared in the 1970s and 1980s. However, these organisations have never had any important roles to play in crop markets. Their function has been limited to the keeping of cereal stores for distribution in case of failed harvests.

Liberalisation has, through the spread of markets, led to increased commercialisation of rural life. But at the same time liberalisation has also meant higher school fees, health care fees, increased prices of agricultural inputs and in general a more expensive lifestyle. This in turn has impacted on the composition of crops grown in various areas. The trend has in some places been from cultivation of "slow crops" to "fast crops", crops that have a short growing time and can be harvested several times a year, and from high input crops to low input crops. This was a response to the pressure to generate cash incomes to meet increased expenses. The shifts of crops were not necessarily adapted to the agro-ecological environment and nutritional needs, but to their ability to earn short-term cash (Ponte, 2002).

### *1.1.3 Market Reforms for Export Crops*

While food markets were largely liberalised in the 1980s, substantial reforms in the export crop sector only emerged in the 1990s. The background was that governments had a much higher degree of control over export crop marketing than over food crop marketing. Public revenue from price taxation of agricultural exports has been an important source of government funding, which means that reluctance to reforms have been substantial in many places. After independence this taxation was one of the few sources available for governments to finance national budgets. Furthermore, since export crops typically are more dependent on credits and purchased inputs than food crops, some governments have been sceptical of the ability of the private sector to provide for the distribution of these inputs. All this contributed to the slower pace of reforms in the export crop sector (Kherallah et al, 2000, p 5.1)

The expectation that currency devaluations would raise the prices of export crops in domestic currency terms at producer level was only partially fulfilled. It happened only in such cases where the effects of exchange rate changes were not captured at intermediary levels, as they were in Tanzania, Uganda and Zimbabwe. By the end of the 1999/2000 agricultural seasons, market reforms had been undertaken in most export crop markets in Sub-Saharan Africa. Important exceptions were coffee in Kenya and cotton and cocoa in some West African countries (Ponte, 2002, Kherallah et al, 2000, p 5.5). Townsend (1999) reports that from the period 1989/90 to 1996/97 the production and sale of export crops in Africa grew by 30 per cent in volume, equal to an annual growth rate of 3.8 per cent, which exceeds the estimated 3 per cent annual population growth in the region.

Market liberalisation has, in general, led to more rapid payments and an increasing share of the export price going to producers across countries and crops (Kherallah et al, 2000, p 5.22). However, there is a growing concern regarding deteriorating quality of crops, which counteracts the trend of increasing shares of export prices being paid to producers. This has been the case with for instance cocoa in Nigeria, Cameroon and Ghana and with cotton in Tanzania (Akyima, 2001, Shephard and Farolfi, 1999, Kherallah et al, 2000, p 5.34, Ponte and Fold, 2001). In Uganda coffee quality has lately been recovering and in Kenya, where the market continues to be controlled by the private sector, quality has improved during the second half of the 1990s.

As to cotton, ginneries have been privatised in many countries. In Uganda this happened during the last half of the 1990s with support from multilateral donors. By the end of 1997, out of 31 ginneries, 27 were operated by the private sector, and even some new ones had been established by the private sector (Shepherd and Farolfi, 1999). In Tanzania, cotton market liberalisation created a relatively high level of competition in ginning. In three regions in and around the Victoria Lake zone about two thirds of a total of 30 ginneries, were either privately operated or joint ventures. Out of these four were multinationals (Gibbon, 1999). Most of the private ginneries were in addition newly established. In West Africa, however, cotton marketing and ginning remains in the hands of parastatals (Kherallah et al, 2000, p 5.15).



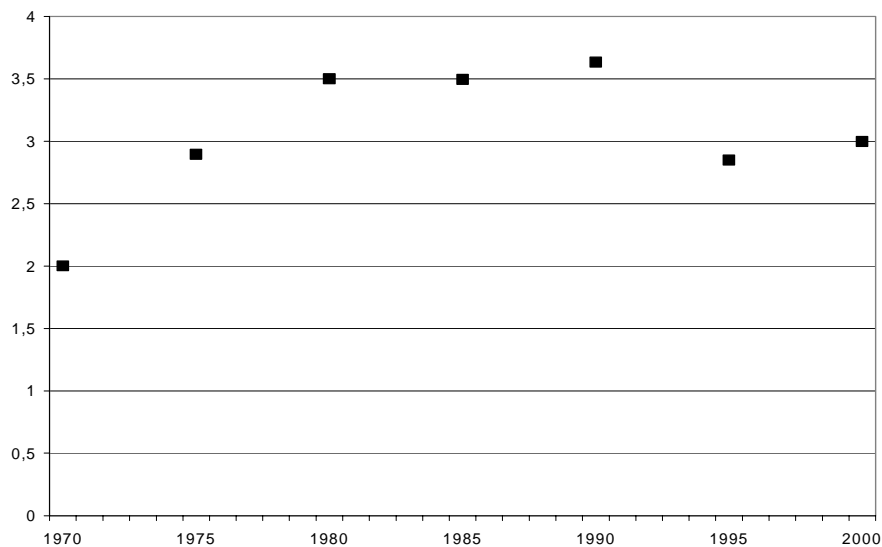
#### 1.1.4 Input Market Reforms – The Case of Fertilizer

State withdrawal also concerned the marketing and provisioning of inputs, where major changes occurred in the 1980s and 1990s. Decisions were taken to provide space for the private sector so that proper markets could develop. This change has been taking place at different speeds in a number of countries in Sub-Saharan Africa.

Throughout the 1980s but in particular in the 1990s, parastatal input and seasonal credit supply organisations have been scaled down or abolished in most Sub-Saharan African countries. In general input liberalisation has been associated with higher farm-gate input prices in real terms, reduced access to credit facilities for input purchases and, in remote areas, market failure in input distribution (Gibbon, 1999, Ponte, 2001 and 2002).

As a result of increased fertilizer prices, the use of fertilizer has declined in some Sub-Saharan countries. Among the 21 largest users of fertilizers, seven countries saw an absolute fall in use between the early 1980s and the late 1990s (Kherallah et al, 2000, p 3.45). Calculated as fertilizer consumption per rural inhabitant, the trend for Sub-Saharan Africa was steadily increasing during the period 1970-1990. However, during the 1990s the consumption has gone down from 3.6 kg/rural inhabitant to 2.99 kg/rural inhabitant (FAOStat, April 2003)

**Graph 1.1:** Fertilizer Use Per Rural Inhabitant in Sub-Saharan Africa



Source: FAOStat, April, 2003.

A comparison with other regions of the developing world shows that fertilizer consumption is much lower in Sub-Saharan Africa than in other regions. Whereas Latin America and the Caribbean consume 71 kilos of nutrients per hectare of arable land, and the Near East and North Africa consume 65, Sub-Saharan Africa consumes only 9 kilos per hectare. The equivalent for East and Southeast Asia is

238 kilos per hectare (figures from 1996/97, Kherallah et al, 2000, p 3.2, table 3.1).

The annual growth of fertilizer use has, with 0.7 per cent annually since the early 1980s, also been slower in Sub-Saharan Africa than in any other region. Reasons given for this difference are higher fertilizer prices in relation to crop prices in Sub-Saharan Africa, higher transport costs and lower responsiveness to fertilizer of the crops typically grown in Sub-Saharan Africa (sorghum, millet, yams, cassava) (Ibid, p 3.4).

In Sub-Saharan Africa four countries (Ethiopia, Zimbabwe, Nigeria and Kenya) account for three-fifths of all fertilizer use. The use is higher in Anglophone countries, but no correlation has been found between fertilizer use and population density, income per capita, irrigated area, area devoted to export crops or to the fact that a country has a coastline (Ibid, p 3.7).

Input distribution through the free market is the most common situation in Sub-Saharan Africa following liberalisation (Shepherd and Farolfi, 1999). Such a situation leaves input distribution to market forces and in some cases it can also involve measures and incentives for private traders to enter the area of input supply. However, recent tendencies towards renewed state involvement have been detected (Cooksey, 2003 and Jayne et al, 2003).

The success or failure of private traders in providing inputs at reasonable prices depends on geographical location and as well on which of three possible settings of "free market" supply of inputs applies. According to Ponte (2002, pp 29-30) these settings include, (i) one characterised by independent input traders, (ii) one in which the agent buying the crop also provides the inputs, but on a cash basis and (iii) one which involves an institutional arrangement for free market provision of inputs. In such a setting, crop traders externalise input provision through participation in so-called voucher schemes. It is difficult to establish the impact of fertilizer market liberalisation in Sub-Saharan Africa on agricultural productivity. Studies undertaken e.g. on maize indicate that this impact has been low or negligible, probably because of the low overall use of fertilizers (Kherallah et al, 2000, p 3.49ff).

#### *1.1.5 External Markets*

Partly due to changes in international trade treaties, partly due to changes in national policies, conditions for African products on world markets have changed. During the 1990s agriculture was earning Sub-Saharan Africa decreasing amounts of foreign exchange due to continuing deterioration in the terms of trade of the most important African export crops, i.e. coffee, cocoa, tea and tobacco. African export revenues from coffee and cocoa as per cent of total revenues declined from 48 per cent in 1980-89 to 33 per cent in 1990-97. During the same period the share of traditional African export crops (which in addition include cotton, sugar and rubber) went down from 74 to 70 per cent. Hence the 1990s have seen export diversification within traditional crops but also the emergence of non-traditional export crops, such as fruits, cut flowers and vegetables (Ponte, 2002).

Overall, however, African producers have not been able to capture the new market niches in countries in the north associated with changing consumption patterns. This is mainly due to weak institutions in the sense that the capacity to live up to technical requirements and standards and to build proper infrastructures has been too weak (Ponte, 2002). To the extent non-traditional exporters have been able to benefit from increasing external demand, these operations tend to be controlled by foreign owned companies or by non-African minorities (Dolan et al., 1999; Jaffee and Morton, 1995; and Matondi, 2001). Northern supermarket chains are also becoming important demand factors for fresh vegetables. However, increasingly they source such products from their own estates or other large-scale commercial farms, rather than from smallholder producers (Dolan et al., 1999 and Ponte, 2002).

In the pre-liberalisation era, stock holding was important for international commodity markets and strongly related to market power in non-perishable agricultural markets. Through stock holding, producing countries were able to sustain a high level of prices, and processors and retailers could minimise risks of non-availability of specific commodities in the short and medium term. With the introduction of liberalisation, stock holding has been avoided by all actors and public influence on supply in producer countries has been difficult to achieve in view of the liberalisation of domestic markets (Ponte, 2002, Bassolé, 2000, p 99, 117). What remains of stock holding in Sub-Saharan Africa is basically to meet food security concerns. As a result of the limited extent of storage and stock holding, cereal grain prices in Sub-Saharan Africa remain highly volatile compared to other developing countries (Kherallah et al, 2000).

## **1.2 Contradictory Descriptions of Agricultural Trends**

Towards the turn of the century contradictory arguments were presented as to which direction agriculture in Sub-Saharan Africa has taken during the 1990s. From the late 1960s onwards, Sub-Saharan Africa has shown negative growth in per capita agricultural production. Sub-Saharan Africa's share of the world's agricultural trade has also fallen during this period. However, during the 1990s, the trend has levelled out (Kherallah et al, 2000, p 1.4ff). It is the interpretation of this change that is being debated. Some argue that we have seen a major trend towards a "de-agrarianisation" and even a "de-peasantisation". Others argue that we have seen a long-term agricultural upturn on the continent, which has emerged during the 1990s. Rising levels of agricultural productivity are portrayed as prime indicators of this.

Let us take the argument about de-peasantisation first. Based on 16 case studies in seven different countries, the De-Agrarianisation and Rural Employment Network, DARE, argue that first and foremost structural adjustment programmes have opened up the continent for international de-agrarianisation forces. Global market developments are, according to this view, pushing for higher rates of productivity, which means that many producers are forced out of the market. This has, however, in Africa triggered a huge, unplanned response in rural areas in the form of increasing income diversification. Peasant households expend their labour and

capital on a number of different income sources. This is a practice that even earlier has been broadly documented, but now is quickly becoming even more common (Bryceson, 1999, p 52).

In the case studies undertaken by the DARE project this trend towards higher incidences of diversification has been evident, with the exception of the case studies from South Africa. Hence, it is these facts that underlie the DARE arguments of de-peasantisation.

Those observing increasing productivity present a completely different picture. They argue that the overall, long-term trend in African agriculture has been positive. Steve Wiggins argued in 1995, based on 14 case studies from six countries, that the dominant trend was a slow increase in agricultural production as measured per head (Wiggins, S, 1997, pp 807-848). Using national aggregate statistics, Pardey et al support such a view, claiming that labour productivity in African agriculture has increased by 0.5 per cent annually since 1961, whereas land productivity for land under crops has increased by 1.7 per cent (Pardey et al, 1995, pp 1-11). Thirtle et al. carry this argument further. They have constructed a "Malmquist total factor productivity index" for 47 African countries during the period 1961-91, and found that this has been growing at an average rate of 1.27 per cent (Thirtle et al, 1995, pp 323-348). Put together with stories about rapid increases in cashew nut production in Tanzania, about cotton expansion in Ghana and about market liberalisation in the Western Cape province of South Africa, this is used as "a partial explanation for the revival of African agriculture" in the 1990s (Thirtle, 1998, pp 71-73).

The weak statistical base obviously makes it possible to draw contradictory conclusions about the overall agricultural development in Sub-Saharan Africa. But there also exists quite a vast literature trying to explain economic growth in this region. Given that the agricultural sector in most countries constitute more than 30 per cent of GDP in at least 15 countries, might it perhaps be possible to learn something from these studies? If we see which factors best explain growth behaviour on the continent, we might perhaps also be able to draw some conclusions about which direction the agricultural sector is taking now and will take in the future.

The general consensus is that economic growth in Sub-Saharan Africa has lagged behind other developing countries, and that reform programmes have fallen short of expected outcomes (Commander, 1989, Helleiner, 1993, p 29, Mosley and Weeks, 1993, p 1588f, Cornia and Helleiner, 1994, Spencer and Badiane, 1995, Mosley et al, 1995, p 1470, Mkandawire and Soludo, 1999, Eicher, 1999). Per capita growth rates for Sub-Saharan Africa have been negative throughout the 1980s and the 1990s, even though there seems to have been a slight improvement in the first half of the 1990s.

What might explain such a weak performance? A number of cross-country regressions have found an African "dummy"-variable (value 1 if the country is African, value 0 if not) to be significantly correlated with growth. This has led Easterly and Levine (Easterly and Levine, 1998, pp 120-142 and Easterly, 1996, pp 19-30) as well as Sachs and Warner (Sachs and Warner, 1997, pp 333-376) to

attempt to show what explains this variable. They have thus found factors that may explain why African economies have grown at a slower pace than other low- and middle-income countries during the last three decades. Easterly and Levine show that the degree of ethno-linguistic differences within countries, together with a variable that measures the economic growth in neighbouring countries, no longer render the Africa dummy as significant. The mechanism in the latter variable is interpreted as a spill-over effect: if your country grows economically your own growth tends to be higher. Easterly and Levine however admit that this gives a limited understanding:

”Admittedly, the replacement of the Africa dummy by a growth spill-over effect really only changes the source of mystery rather than removing it” (Easterly and Levine, 1998, p 136).

The question is whether such a spill-over variable rather measures the same thing as a regional dummy variable? The difference might be that the unknown factor is now observed in different regions within Sub-Saharan Africa. Also the ethno-linguistic variable may be questioned: What are the mechanisms whereby such a variable has effects on the economic growth? And why did a number of African countries show relatively higher growth rates during the 1960s, whereas ethno-linguistic differences have hardly changed since then?

Sachs and Warner have criticised the conclusions of Easterly and Levine by testing the ethno-linguistic variable and at the same time controlling for an index of trade openness, which they have constructed. They find trade openness to be a better explanation than the Easterly and Levine variable. But the construction of their index has also been criticised, as well as their way of drawing conclusions by comparing standardised beta coefficients, while the units of measurement are incompatible (Kenny and Syrquin, 1999).

Both Easterly and Levine and Sachs and Warner have been criticised by Dani Rodrik. He builds his argument on a regression including only countries from Sub-Saharan Africa. Such an approach does, according to him, capture variation in economic growth in the African context better, given that this continent is different from other continents in certain respects. In his study, the variables that explain growth are macro economic stability together with the levels of human capital development. Ethno-linguistic variation and trade openness are no longer relevant (Rodrik, 1999).

But is Rodrik’s approach reasonable? By concentrating on countries in Sub-Saharan Africa he misses the opportunity of finding what is specific with this region, compared to other low- or middle-income regions. But, if Sub-Saharan Africa on the other hand is specific, this approach gives clearer answers. The next question then, is whether Sub-Saharan Africa is the relevant unit of study. Maybe an even more disaggregated approach will give better answers? How do we know that causal relations are homogenous at the Sub-Saharan Africa level, and not at a sub-regional level, as was hinted at in the discussion about the Africa dummy variable?

Kenny and Syrquin have discussed the selection of country samples, time periods and other matters of study design. They have compared 21 cross-country

regressions from the last 13 years, trying to explain economic growth in Sub-Saharan Africa. Such a comparison runs the risk of mixing relevant studies with less relevant ones, but after a careful investigation the authors reach the following conclusion:

”The clearest result of our survey of African growth regressions is that there are few clear results. Changing the country sample, the period and the conditioning sets even just within Africa has a serious effect on the coefficients and significance of variables. Looking at the two studies in our sample with the strongest robustness test, Levy (1988) found no variable he entered robust, while Assane and Pourgerami (1994) found only two robust. The only variable used in more than three different studies that was significantly related with growth in all of them was the real exchange rate” (Kenny and Syrquin, 1999, p 29).

Their main conclusion is that it is impossible to make any inferences about individual countries from these cross-country regressions. Uncertainties stem from a very weak statistical basis – data is very seldom reliable – and from a validity problem: What is actually measured by some of the variables used in the cross-country regressions?

As argued elsewhere, cross-country regressions are unable to present credible explanations of the relative lack of economic growth in Sub-Saharan Africa, because the results change with the change in country sample, time period selected or variables entered (Havnevik and Hårsmar, 1999, chapter 1.1). Furthermore, in one country - Tanzania - where agriculture in official statistics has been described as growing quickly during the 1990s, the actual development has, after a closer look, been proven to be gloomier than previously stated. It is true that the actual level of agricultural growth cannot be determined exactly, but the most probable estimate is that it has increased at about the level of population growth during the decade (Ibid, chapter 4). These facts should lead to a general scepticism about statements based on national statistics. We may furthermore conclude that the boom in cashew-nut production during the 1990s, which was used as one argument in support of the recovery, has not contributed to any overall increase in Tanzanian agriculture.

When returning to the discussion about agricultural development in Sub-Saharan Africa in general, we may thus conclude that macro level studies do not provide us with much guidance. There remains, even after these studies have been undertaken, something important to be explained in terms of reasons behind economic and agricultural growth in Sub-Saharan Africa. If we want to make inferences about the general development, we are left with disaggregated studies, often case studies. Since the most recent of the studies referred to above indicate an increasing diversification of income sources amongst peasants, this is perhaps the strongest argument about developments in the 1990s presented so far. But we may not conclude on such a basis that increasing diversification is a general pattern. We may neither conclude that such a pattern indicates any actual de-peasantisation or de-agrarianisation. We lack a firm descriptive basis to draw conclusions from. It is however a fact that the practice of income diversification is widespread on the African continent, and indications are that this practice is spreading. Hence, we

find it relevant to continue studying diversification as a way of inquiring into factors that may cause a less than optimal supply response in Sub-Saharan agriculture.

### *1.2.1 Income Diversification a Spreading Phenomenon*

Income diversification is spreading in a period where agricultural policy reforms are legion in African economies. However, income diversification is not a new phenomenon. Meagher has, for example, shown that diversification was already a practice of the pre-colonial Hausa culture in the Sahel (Meagher, 1994). Others have shown that income diversification has been part of peasant livelihoods for long periods of time in other parts of Sub-Saharan Africa (Havnevik, 1993, pp 124-178).<sup>1</sup> Income diversification seems to be a practice that has been prevalent for a long period of time, but that has been on the rise lately.

Attempts at measuring the prevalence of diversification in Sub-Saharan Africa have been made. Haggblade et al found that non-farm incomes averaged 25 to 30 per cent of total income, when measured in a number of case studies conducted in the 1970s (Haggblade et al, 1989, p 1173-1201). Indications are that this share has been increasing since then. Supporting such a conclusion are data from 27 case studies from the 1980s and 90s, which show an overall average of some 45 per cent (Reardon, 1997, p 735-747). The indication from all the case studies is furthermore that the practice of diversification is fairly evenly spread over Sub-Saharan Africa.

The activities that peasants undertake when they diversify their income sources are usually categorised in the following way:

- a) employment on other local farms;
- b) migration to find employment;
- c) self-employment in a rural non-agricultural activity;
- d) employment in the non-agricultural activities of others (Reardon, 1997, p 735, Rønneberg Møller, 1998, p 2).

These non-agricultural activities are mainly undertaken during the dry season, when labour demand in agriculture is low. Even if incomes from non-agricultural activities tend to be higher than farm incomes, it is only in rare cases that non-farm activities are allowed to compete with farming during the rainy season. This is when incomes from the non-farm activity are substantially higher than the income earned from agriculture (Reardon, 1997, p 739).

In his overview of 27 different case studies, Reardon establishes that non-farm earnings in Sub-Saharan Africa were commonly redistributed in a regressive way, implying that non-farm activities increased the inequality in rural areas (Ibid, pp 735-748). This indicates that poor people possibly are having limited access to especially the more remunerative non-farm activities, but also non-farm activities in general. This might be because of their insufficient access to productive assets, to information, markets, start-up financing or social groups, or because of tradition or norms that condition entry into market niches (Barrett et al, 2000, p 11).

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<sup>1</sup> For West Africa Polly Hill questioned the established view of perceiving rural households mainly as peasants already in 1982 (Hill, 1982).

There is, however, an interesting exception to this general picture of regressive distribution due to non-farm earnings. In good agro-climatic zones, non-farm activities tend to decrease the unequal distribution of incomes. It appears as if poor people have much better access to labour-intensive employment and jobs with low requirement for start-up capital and education in these areas. The share of local non-farm incomes as opposed to migratory incomes is also much larger in these areas. The importance of the interplay between dynamic agricultural sectors and non-farm economic activities is thus further underlined. Spin-off employment from agriculture tends to imply larger shares for services and commerce in these benevolent agro-climatic areas (Reardon, 1997, pp 739, 741f).<sup>2</sup>

The general pattern of the distribution of income diversification in Sub-Saharan Africa differs from what is found in Latin America and parts of Asia. On these other continents, the share of non-farm income tends to be higher among poorer and richer households, compared to the middle-income sector. Hence, a diagram representing the level of non-farm income as a share of total income would describe a U-shape, while moving from poorer to richer households. This may be so because there are high labour-to-capital-ratio jobs available, which have low entry barriers in these regions. Poor people may easily find these jobs. Furthermore, this redistribution of non-farm incomes is more probable if infrastructure is relatively good, population and market densities are high, the agricultural sector is dynamic, landholdings are unequal and the degree of urbanisation of the rural area is high. The low level of diversification in the middle would depend on households in the mid-range being able to specialise in crop production, while richer households are able to diversify into more capital-intensive activities (Reardon et al, 2000, pp 13ff).

By contrast, in Sub-Saharan Africa, the general tendency is that non-farm incomes increase with increasing income levels. This could be explained with a scarcity of low-barrier-to-entry jobs, underdeveloped farm labour markets, traditional production techniques, relatively equal land distribution, low population density, weak infrastructures and important entry barriers for investment in capital-intensive sub-sectors (Ibid, p 15f). This scenario suggests that rural markets in many parts of Africa hinder the entry of poor people. The income distribution caused by income diversification thus becomes regressive (Barrett and Reardon, 2000, p 9).

As this brief discussion on income diversification indicates, we need to move to a more local level in order to learn about factors causing or hindering agricultural growth in Sub-Saharan Africa. This study will concentrate on the situation in one

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<sup>2</sup> These latter statements need to be qualified, however. A study using empirical material from three cases: Kenya, Rwanda and Ivory Coast, found almost the opposite result compared to that of the case studies referred to above. First, income diversification was generally much higher in the worst agro-climatic case, Kenya, than in the best, Ivory Coast, with Rwanda lying in between. Secondly, poor households were diversifying much less than better off households in Ivory Coast. In Kenya and Ivory Coast, no differences were noticed in this respect (Barrett et al. 2000, p 18f). Since Ivory Coast represents the best agro-climatic zone of the cases in that study, this implies a total contradiction with earlier studies. A tentative conclusion may be that a dynamic agricultural performance is not enough in all cases for non-farm activities to reduce income differences. The presence of low-barriers-to-entry-jobs is probable, but not guaranteed, in cases where there exists a dynamic agriculture.



area in Burkina Faso in West Africa. This is a country with a good record when it comes to the implementation of agricultural policy reforms, and there are also other reasons why we could expect crop and input markets to be relatively well functioning in this country. Hence, the choice of study area is made in order to represent a “most likely” case of agricultural expansion. This method of choosing a study case will open up possibilities for some generalisations. Further discussion on why I have chosen this country will follow in the methodology section. But before that an introduction the conditions prevailing in the country will be presented.

### **1.3 Agriculture in Areas of Uncertainty**

#### *1.3.1 A Range of Strategies*

Agriculture in Burkina Faso may be characterised as being exposed to a number of risks and uncertainties. In areas characterised by uncertainty, peasants opt for strategies that decrease variability in their consumption. Given that households are assumed to be risk averse, their responses to income instability ought to be some of the following:

- (i) participating in the credit or insurance markets;
- (ii) receiving transfers from other households, i.e. utilising the social safety net;
- (iii) selling assets;
- (iv) diversifying income sources.

In low-income countries, credit and insurance markets are typically characterised by moral hazard and information problems. Furthermore, they tend to covariate with crop output since most households face the same kind of problems at the same time. The tendency is therefore that these markets are severely underdeveloped, and if they exist, they tend not to be an option for the majority of the peasants (Binswanger, 1986). Social safety nets are often of fundamental importance, but seldom of a size that makes them viable as full-scale options in times of harvest failures. Reasons for this may be found in the covariance phenomenon cited above, as well as in the partial breakdown of traditional values in times of commercialisation and modernisation. The selling of assets may be an absolutely essential strategy. The result of such a strategy will, however, be problematic for the future production possibilities of the selling household. Hence, it will tend to be more of a strategy of last resort, which results in redistribution of assets, rather than a strategy that is actively sought. This builds up to an argument about the centrality of income diversification in situations of uncertainty. By putting eggs in more than one basket peasants increase their chances of achieving a minimal level of success also in years of hardship. Diversifying strategies of different kinds would therefore be expected when peasants are to avoid unbearable losses.

However, according to portfolio theory there is a balance to be struck between diversification and specialisation. While absolutely essential, risk reduction may come to the detriment of agricultural growth.

”A less than perfect correlation between the returns of assets allows for gains from diversification by reducing risk costs, although the gains in risk reduction diminish as the number of assets increases. In contrast, economies of scale, which reduce average cost as production increases, favour specialisation” (Robinson L.J. and Barry P.J. 1987, p 142).

Agriculture in the West African Sahel region is highly uncertain. Management of scarce natural resources is here put under stress by increasing population pressure and shifting climatic conditions. For the last four decades, rainfall has been scarce, declining and erratic. Agricultural specialisation in this region is furthermore hindered by the following factors:

- (i) the existence of only one short cropping season per year;
- (ii) badly functioning markets for agricultural labour;
- (iii) low labour productivity in agriculture;
- (iv) lack of irrigation;
- (v) poor soils.

This suggests that peasant income diversification might be an important strategy for agricultural development in this region. But in order to deal with such an issue there is a need to know more about the agriculture in the country and about what has happened during years of agricultural reforms. To this we now turn.

## **1.4 Agriculture in Burkina Faso**

### *1.4.1 The General Setting*

The economy in Burkina Faso is heavily dominated by agriculture. According to recent figures, this sector employs some 86 per cent of the population, whereas it contributes some 38 per cent of total GDP and 80 per cent of export incomes. One third of the national territory is classified as agricultural land (9 million hectares). Slightly more than a third of this agricultural land, 3,5 million hectares, is cultivated annually. Most prevalent is the cultivation of cereals. 88 per cent of land that is cultivated annually is used for cereals, mainly sorghum, millet and corn. A major part of these cereals is used for self-subsistence. Average land productivity is low with slightly less than 850 kgs/hectare an average yield. A very large majority of the farms are small family farms with three to six hectares of cultivated land (Ministère de l’agriculture, August 1999, p 7f, Kaboré et al, 1997, p 11).

The country is usually divided into five regions, characterised by their different agro-climatic conditions, and by their different combinations of agriculture and pastoralism. These regions are the Sahelian region in the north, the eastern, central, south-western and southern regions respectively (Bassolé p 17).

A rough description would be that the Sahelian region is characterised by heavy emphasis on pastoralism, its low and uneven rainfall pattern, and concentration on sorghum and particularly millet when it comes to cereal production. The eastern region is characterised by low, but somewhat higher rainfall levels, and a combination of agriculture and cattle breeding. This could also be said about the central region. The population pressure reaches its highest levels in the central region. The south-western region is the most important cereal producing area of the

country, receiving higher rainfall levels. The southern region concentrates more on cash crop cultivation than the other regions. This is also a surplus region when it comes to agricultural production, albeit less important than the south-western region.

I will, however, in this context use another, older, classification in order to be able to compare our material with earlier studies that also used this classification. I will therefore classify into three agroecological zones:

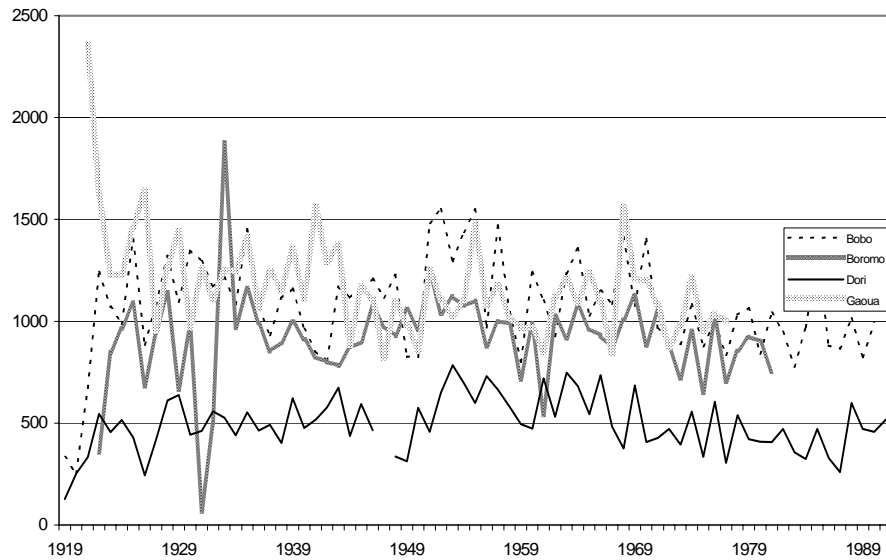
- the Sahelian zone, which is characterised by annual rainfalls less than 600 mm;
- the Sudanian zone, where rainfall annually reaches 600-900 mm;
- the Guinean zone where rainfall annually exceeds 900 mm.

**Map 1.1:** Agroecological Zones in Burkina Faso



Obstacles and sources of risk are legion in Burkinabé agriculture. The factor mentioned first in any discussion on this subject is scarcity of water. With only one rainy season per year, only one harvest is possible for most cultivators. The cultivation season stretches from May/June up to September/October. Annual precipitation ranges, as we have seen, from some 500 mm in the north to some 1200 mm in the south-western parts of the country. The central part of the country gets 600-900 mm annually. The tendency, however, is that the central and northern parts of the country receive decreasing amounts of rain, and that rain comes more irregularly.

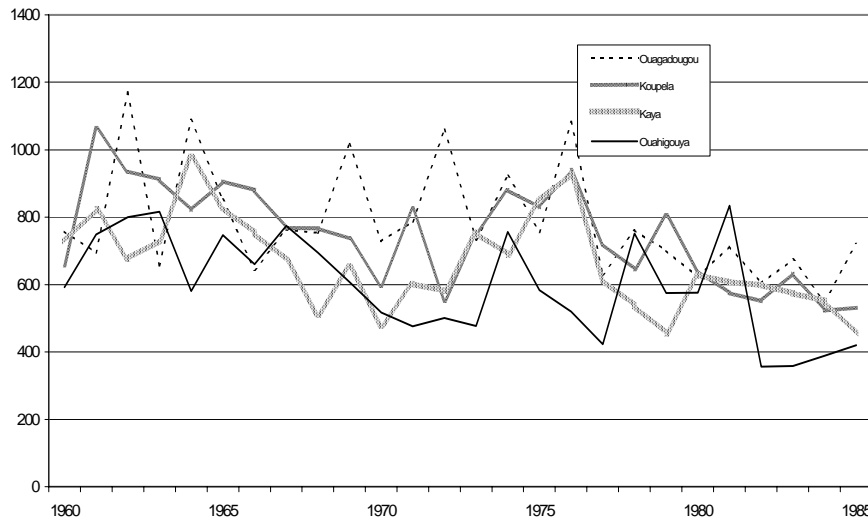
**Graph 1.2:** Rainfall in Four Cities



Source: INSD, 1996: "Annuaire series longues du Burkina Faso", p 5-12.

This table shows that rainfall has been irregular during the whole of the 20th century, but that the tendency for slightly decreasing levels of rainfall emerged at the beginning of the 1970s. The cities, where measuring has been undertaken, are situated in the north-east (Dori), the central western part of the country (Boromo) and in the south-western and southern parts of the country (Bobo and Gaoua).

**Graph 1.3:** Rain Levels on The Mossi Plateau



Source: INSD, 1996b: "Annuaire series longues du Burkina Faso, p 14.

This second table takes a closer look at the evolution of rainfall during the last 30 years in four cities situated at the "Mossi Plateau", which is the plateau in the central parts of the country, named after the dominating ethnic group living there. The decreasing levels of rainfall that were observed in the previous table during this period are now more clearly visible. The rainfall data were gathered through measurements in Ouahigouya in the north of the Mossi Plateau, Kaya in the north-east, Ouagadougou in the middle and Koupela somewhat towards the south-east.

Another obstacle for cultivation is the decreasing fertility of soils, and the degradation of natural resources. Increasing population pressure seems to lead to the cultivation of more marginal soils, a reduction in pastoral grazing lands and more frequent conflicts between different groups of people. Productivity increases have not been sufficient to counter such trends (Tallet, 1997, p 169). However, such general conclusions have been challenged by a study of land degradation as seen from different perspectives and on different scales. When measured as landscape change through techniques such as remote sensing and aerial photographs, land degradation may be established. But when measured at the level of soil nutrients it is not as obvious that land is being degraded. In a study from south-western Burkina Faso, Gray could not establish any decrease in soil fertility on lands that were under continuous cultivation, with the exception that levels of phosphorus were falling (Gray, 1999, p 335).

Hence, the practices of farmers and their responses, in terms of changing cultivation practices, have to be taken into consideration before one may establish whether soil is being degraded or not. The results of the study led Gray to argue that land scarcity in the southwest is leading to an intensification of agriculture along the lines described by Ester Boserup (Ibid, p 337, Boserup, 1965).

One of the studies that build on aerial photographs made comparisons between the character of lands in 1976 and 1987 (Compaoré, 2000, pp 101-113). Processes of degradation were noticed in three of four agro-ecological zones: the north and south Sahelian, and the north and south Sudanian zones.

In this study, lands were classified into the following types: savanna forests, savanna bushlands, bushlands, complexes of cultivation, fallow, habitation and water management areas, and steppes. These types of land are seen as being on a falling scale when it comes to preservation of natural resources. Hence, when lands become re-classified into “lower“ categories, they are being degraded. In the “north Sahelian“ zone almost 77 per cent of the lands were being degraded during this ten year period, with the most prevalent processes involving bushland and cultivated lands being transformed into steppe lands. This means that 7 per cent of the lands are being degraded each year. On the other hand slightly more than five per cent of the lands were upgraded during the same period.

In the “south Sahelian“ zone the share of degraded lands was even larger, i.e. 84 per cent. The most common form of degradation was the transformation of cultivation complexes into steppe lands. In this region only half a per cent of the lands were upgraded, whereas the rest remained constant. The fact that more lands were degraded in a zone that is better off agro-ecologically is noteworthy, and remains to be explained. However, it may have to do with more peasants abandoning their lands in the southern Sahelian zone, as compared to the northern Sahelian zone. In both these zones, the major part of the degradation had to do with out-migration. When agricultural land was abandoned, because of an increasingly harsh climate, steppe land took over. Farming systems in the north Sahelian zone may have undergone an earlier adaptation to a harsher climate, as compared to the south Sahelian zone.

In the “north Sudanian“ zone some 29 per cent of the surface was degraded, whereas 50 per cent stayed constant and 21 per cent of the lands were upgraded. In the “south Sudanian“ zone 32 per cent of the lands were degraded, 32 per cent remained constant whereas 27 per cent of the lands were upgraded. What hides behind the figures in both Sudanian zones is basically the transformation of different kinds of lands into cultivated land. Hence, what we note in all four of the zones are major processes of migration related to the degradation or up-gradation of lands, migration flows going from north to south and from zones of decreasing and increasingly volatile rainfalls into zones of more stable climatic conditions.

The alarming results of the Compaoré study are supported by a newly conducted land survey conducted by the National Programme for Land Management, PNGT (2002).

Compaoré aims at explaining the degradation of soils that he observes. He applies a statistical regression with a number of different independent variables. In this analysis strong correlations are found between degradation (treated as a dependent variable) and number of modern wells, number of water reservoirs, number of cattle and number of inhabitants, respectively. The relationship with number of cattle is negative, i.e. more cattle mean less degradation, whereas the other correlations are positive.

When land quality being constant is treated as the dependent variable strong correlations are found with number of modern wells, capacity of water reservoirs and number of inhabitants. The upgrading of land quality is found to correlate strongly only with the number of inhabitants.

We may note that all types of changes in land use are related to the factor population. Furthermore, in all cases these correlations are all positive, which means that when population pressure goes up land may be degraded, upgraded or remain unchanged! (Compaoré, 2000, p 110f). Contrary to what is argued in the study, we cannot therefore conclude that increasing population pressure leads to degradation in lands. It may lead as well to an upgrading of lands - and to a status quo in land quality. There must be other factors related to the behaviour of people that affects land quality.

Hence, Compaoré makes a clearly misleading interpretation of the correlations he finds. Furthermore, he does not provide any complete presentation of the results of the regression. It is therefore not possible to draw any conclusions about causation on that basis. What appears to be the case is that access to water is related to land degradation in multiple ways. Capacity to retain rainwater creates possibilities to continue with current uses of lands. The introduction of modern wells is however related to the degradation of lands. Different reasons for this are possible. One possibility is that the introduction of modern wells increases the general pressure on ground water levels beyond their capacity. Another possibility is that modern wells are introduced when land degradation has already occurred, but without having effects in terms of reclaiming lands. A third possibility is that the introduction of modern wells causes land degradation through the destruction of fine balances in traditional land and water management. Stories have for example been told about what happens when modern wells replace traditional wells. Since modern wells are more permanent and have higher capacity than traditional ones, land around new wells comes under greater pressure from cattle and human beings, and customary systems for the management of natural resources are undermined.

Customary systems clearly regulated at what time of day the first, the second, and the third herdsman that arrived at the well could water his animals. This had the effect of diminishing the pressure on the lands surrounding the well. Further, if the well was so shallow that it dried out after a certain period, the pressure on surrounding lands became only temporary. In a sense, these less permanent wells provided for periods of fallow of lands surrounding the wells. On the contrary, permanent wells make the pressure on surrounding lands permanent, and this may be part of the explanation of why there was a connection found between degradation of lands and the availability of modern wells.

Further obstacles and problems for agriculture in Burkina Faso beyond water and land degradation are the continuous use of extensive methods of cultivation, difficulties in obtaining rural credits, high prices for transportation and lack of clarity when it comes to land rights: the latter factor relates to the co-existence of a traditional and modern, centrally imposed system of land rights (Ministère de l'agriculture, August 1999, p 8).

But at the same time, there are also possibilities of increasing the agricultural production in the country. First, only a third of the land classified as agricultural land is cultivated annually (3.5 million out of 9 million hectares). Especially in the southern and eastern regions, there exist considerable possibilities of expansion into under-utilised lands. Also when it comes to the irrigation of lands, more could be done. Of the 165,000 hectares deemed relevant for irrigation, only 12 per cent (approximately 20,000 hectare) is currently under irrigation. At least 10 billion cubic metres of surface water, and 113 billion cubic metres of underground water could be used for irrigation.

The fact that different types of cultivations, with different rates of productivity co-exist means that increases in yields and productivity are possible within the framework of current areas cultivated. With this in mind, the Burkinabé government has set out to define and apply a strategy for the sustainable growth of the agricultural sector (Ibid, p 8f).

This program has five prioritised areas:

- (i) to improve the fertility of soils;
- (ii) food security and nutrition;
- (iii) modernisation of agriculture;
- (iv) support to producers and their organisations;
- (v) institutional support, and particularly a decentralisation of institutions.

Other related programmes, such as the preservation of natural resources, water management, improved rural infrastructure etc. are taken care of by other ministries. For each of the prioritised programs the Ministry of Agriculture has developed a plan of action, which it is about to start (Ibid, pp 17-41). This takes us to a broader discussion on how the agricultural policies have evolved.

#### *1.4.2 Agricultural Policy*

After the government structure OFNACER (Office National de la Commercialisation des Céréales) was created in 1971, the cereal markets in Burkina Faso remained a state controlled arena for a long period of time. OFNACER was a parastatal organisation set up in order to deal with the commercialisation of crops. The role of OFNACER was initially to control exportation of cereals and to assure deliveries of cereals to the cities and to areas with a deficiency in crop production. For this purpose the OFNACER had a monopoly status in crop processing, distribution and marketing. Regional development boards, the ORDs, were charged with the buying of cereals from producers and village groups. The ORDs were in this sense to serve as complementary to the OFNACER (Bassolé, 2000, p 10 ff).

During the years 1974-1977 the monopolies continued, but, in addition, fixed official prices were offered both to producers and consumers. This system, however, did not function well. OFNACER did not control more than a small share of the commerce, and partially due to lack of resources, it could not fulfil its role when it came to serving rural producers. Hence, in February 1978 the monopolies were partially abandoned, and the rules for commercialisation of cereals were



rewritten. OFNACER was still given the responsibility for selling and stockpiling cereals, but private traders were let in - albeit in a cautious way. These traders had to be certified by the ORDs, and they had to apply the official prices strictly.

With the political revolution in 1983, the pendulum swung again and the activities of the private traders were circumscribed. Hence, the agreements between the ORD and the traders had to be controlled by the newly created revolutionary village committees, the CDR. Furthermore, the traders had to organise themselves in economic interest groups, in which membership was obligatory. The movements of cereals between the different regions were restricted. If any trader was suspected of selling at a price higher than the official one, his stocks were immediately confiscated by order of the CDR (Ibid, p 11f).

After the murder of president Tomas Sankara in 1988, and the political changes that followed, the cereal trading system was gradually changed. In 1990-91 the controlling role of the CDR was abandoned, and in 1992 the entire trade was liberalised as the OFNACER monopoly was brought to an end. At the same time, official pricing was abandoned.

The objectives of the 1992 reform were to make the cereals market more efficient in order to increase the accessibility of cereals and thus reinforce food security. The role of the OFNACER was redefined so that it was only to intervene if all other actors on the cereal markets failed in distributing cereals. The competitiveness of markets was to be increased through, amongst other things, the publication and diffusion of prevailing market prices. The circulation of cereals between different regions was to be supported, and banks be encouraged to extend credits more easily to cereal traders (Bassolé, 2000, p 2f).

#### *1.4.3 The Larger Reform Setting*

The liberalisation reforms were introduced with the support of the World Bank after a period of negotiations. A general economic reform program was started in 1991. Following this, sector reform programs were introduced. In May 1992 the government signed a letter of intent for the agricultural sector, "Lettre de Politique de Développement Agricole, LPDA". This laid the foundation for a reform program, which was developed in collaboration with the World Bank. This program was called "Programme d'Ajustement Sectoriel Agricole, PASA". It aimed at:

- the modernisation and diversification of agricultural production;
- the strengthening of food security;
- better management of natural resources.

The central parts of the agricultural reform program were different forms of liberalisations, such as:

- (i) the liberalisation of the trade in, and the price of, cereals;
- (ii) the liberalisation of the internal trade in rice;
- (iii) the liberalisation of the trade and prices for oil seeds;
- (iv) the closing down of the authority for agricultural price stabilisation, OFNACER;

- (v) the privatisation of several state owned corporations in the agricultural sector, such as FLEX-FASO, Les Grands Moulins du Burkina, GMB, and SOSUCO;
- (vi) reform of the agricultural ministry.

In order to sustain the reforms a coordinating office was created, “Appui au PASA” (support for the PASA), and also a body with the task of surveying food security issues, CCSA (Comité de coordination pour la sécurité alimentaire). As OFNACER had been dissolved, the CCSA initiated another organisation in 1994 responsible for keeping stock of cereals for food security reasons, i.e. SONAGESS (Société nationale de gestion du stock de sécurité alimentaire) (Bassolé, 2000, p 39).

The role of SONAGESS is to buy cereals on the open market and to keep a cereal stock of a certain size as a security measure in case of bad harvests or droughts. Besides this, it is also responsible for the management of an information system, SIM, on prices prevailing at the cereals markets. This latter system aims at increasing the possibilities for traders to keep track of prices in different localities. The aim is to increase the competitiveness and the integration of different marketplaces. It is also meant to be an instrument for the SONAGESS itself in managing the national stock of cereals without disturbing the functioning of markets more than necessary (Ibid, p 40).

Other reform programs were also initiated in the same period. The government, for example, also engaged itself in a medium and long-term strategy for the reduction of poverty and the betterment of living conditions in rural areas. The common basis for all these rural reform programs was the general reform program of the national economy. Since 1992, the World Bank has made agricultural sector reform loans conditional on general economic reform programmes being undertaken. Burkina Faso has also since 1993 signed agreements with the IMF. In January 1994 it was also part and parcel of the great devaluation of the CFA Franc, when the West African central bank, the BCEAO, decided to devalue the CFA franc against the French franc by 50 per cent.

#### 1.4.3.1 Effects of Reforms

The devaluation and the other reforms introduced in the early 1990s were followed by economic recovery. The annual pace of increase in GDP had been 2,7 per cent during the period 1985-1994. In 1995 and 1996 it reached 4 and 6,2 per cent respectively. This increase came principally from a resurgence in agriculture, where the export of cattle and cotton increased. Public finance was brought into balance (with the important exception of the external debt), as was the rate of inflation (2,3 per cent in 1997 and 6,1 in 1996) (Ministère de l’agriculture, PSO, p 4).

Since agriculture is the most important economic sector in the country, there is a clear linkage between results in this sector and the overall economy. It is often claimed that the structural reforms of the economy and the agricultural sector have had effects, at least when it comes to cotton, cattle and rice.

The following table indicates what happened in key sectors when reforms were first introduced:

**Table 1.1:** Evolution in Key Agricultural Sectors.

Season	1991/92	1992/93	1993/94	1994/95	1995/96
<b>Cereals (1000 tons)</b>	2091,6	2157,1	2099,5	1936,6	2054,6
<b>Vegetables (1000 tons)</b>	239	306	311	293	301
<b>Cotton (1000 tons)</b>	163	117	143	151	170
<b>Fruits (1000 tons)</b>	319	331	345	361	377
<b>Forestry, value (mill. FCFA)</b>	49 567	51 434	53 444	56 730	58 303
<b>Cattle, value (mill. FCFA)</b>	74 153	72 921	74 728	76 596	78 511
<b>Total agric. value(mill. FCFA)</b>	273 057	277 573	282 279	280 899	293 159

Source: Kaboré et al 1997, p 24f. Values are given in 1992 prices.

The cotton sector continued to grow even after the years indicated here. In the 1997/98 season total harvests peaked at an impressive 334 000 tons (Ministère de l'agriculture, 1999, p 52). Since then, production has fallen to 257 100 tons in 1999/2000 and further to 217 000 tons 2000/01 (Ministère de l'agriculture, 2001, p 5). These latter figures are still higher than what was harvested in the first half of the 1990s. But we may also note that what took place during a long period of the 1990s actually was a recovery up to a level already reached in 1991/92. Further, we may note that the production of cotton is still to a very large extent dependent on rainfall, since it is not irrigated. This fact was clearly observable during the failed season of 2000/01 (Ibid, p 8).

The overall growth in agriculture, measured in total value, showed an average increase of 1,84 per cent a year over these years. The increase in population was considerably faster than agricultural growth during this period, and we are led to the question why especially the production of cereals apparently does not respond to the reforms undertaken.

Different time series seem to indicate positive trends in cereal production. We may have a look at what the CILSS/Agrymet statistics show:

**Table 1.2:** Cereals Production in Burkina Faso

	1995/96	1996/97	1997/98	1998/99	1999/2000
<b>Cereals (1000 tons)</b>	2308,0	2481,8	2013,6	2657,0	2699,9

Source: CILSS, 2000: "Final report", annex 3.

We note that there is discrepancy from the statistics shown earlier for the season 1995/96. But since this time series is internally consistent, i.e. measured in the same way, we may regard it as indicating a tendency of increasing cereal productions. Seen over the full period, the increase reaches almost 3 per cent on average per year, which is slightly above the increase in population. But great variations occur between the years. The 1997/98 season was the worst during the period, because of the low levels of rainfall that season.

Even lower results were obtained during the 2000/01 season. Lack of clarity remains as to which figures to trust, since the authorities at different times gave at least three different figures for the 2000/01 season. But probably the most reliable figures given claim the production to be 1 862 681 tons for the 2000/01 season (Ministère de l'Agriculture, 2001, p 8). This means a decrease in production by 31 per cent, mainly because of the absence and irregularity of rains.

#### 1.4.3.2 Structural Effects of Liberalisation

In his study of cereal markets in Burkina Faso, Bassolé concludes that liberalisation efforts have resulted in increased producer and consumer prices for the major crops millet and sorghum. Agricultural sector reform was being undertaken from 1992 onwards in Burkina Faso. By examining price levels in seven different local markets in the period between 1992 and 1996, Bassolé finds considerable price increases in the millet price in six out of seven markets, and slightly less considerable price increases in all seven markets regarding sorghum. This, he argues, is the effect of increased competition between cereal buyers (Bassolé, 2000, p 129).

However, Bassolé also notes that the prices remained constant or declined somewhat during the first half of the period. After the 100 per cent CFA devaluation in January 1994, however, the prices rose considerably. While not denying the devaluation effect, Bassolé still argues that it is the development of the market, with increased competition, that has caused prices to rise from 1995 onwards (Bassolé, 2000, p 133).

“At a general level, one may make the following observations regarding the evolution tendencies of consumer and producer prices. The first is that from 1990 to 1995 one observes a decrease in consumer prices, and from 1992 to 1994 a decrease in producer prices. From 1995, however, the tendency is that prices on the market are rising. This evolution of price tendencies seems to have its origins in changing market structures, in other words, in the changes between supply and demand of cereals“ (Ibid, my translation).

Another way of measuring the efficiency of markets is to control the co-integration of prices between different marketplaces in the country. In short, relations between price evolutions in different marketplaces are sought for conducting a comparison of price evolutions between different markets in the country. If co-integration exists, prices in one particular marketplace are dependent upon the evolution of prices in other marketplaces.

Bassolé indicates that two out of eight observed local markets for sorghum in Burkina were co-integrated with other markets during the period 1990-1992, that

is, in the pre-liberalisation period. During the post-liberalisation period 1993-1998 four out of the eight markets were co-integrated. The results obtained were statistically robust (Ibid, p 172).

The study of markets for millet led to the conclusion that three out of eight markets passed the test of co-integration during the pre- as well as during the post-liberalisation period. Hence, no change was observed in this market between the two periods. It may also be noted that the four markets that were not found to be co-integrated were all large and important (Ouagadougou, Koudougou, Ouahigouya and Poutenga).

When no division is made between the pre- and post-liberalisation periods, but rather the whole period 1990 - 1998 is studied, the number of co-integrated sorghum markets increases from four to six, and from three to five regarding millet.

On the basis of these results, Bassolé concludes that long-term price relations have become more stable during the period studied. It is especially the sorghum markets that have become more co-integrated. This should, according to him, be seen as a confirmation of the increased integration of the sorghum market in Burkina Faso. On the contrary, the behaviour on the millet market has not been transformed by liberalisation (Ibid, p 172f).

An overall assessment is that cereal markets in Burkina Faso are fairly well co-integrated, that is, in the words of Bassolé, "all places of exchange of these cereals form part of the same economic market" (Ibid, p 173).

A further aspect of the efficiency of markets is the preparedness of traders to stockpile cereals in order to sell during periods of the year when prices reach their peak, and in this way smooth out temporary price differences. Since climatic conditions allow for only one harvest a year, there are ample opportunities for stockpiling cereals in order to obtain higher prices later in the season, and especially immediately before the next harvest. However, the results of Bassolé's study are somewhat surprising in that a large majority of traders, wholesalers, semi-wholesalers as well as retailers, tend to sell almost without any stockpiling. 74 per cent of the wholesalers sell after maximum one month of stockpiling. 91 per cent of the semi-wholesalers and 100 per cent of the retailers sell within this time period as well. Only 8 per cent of the wholesalers sell after having stockpiled their goods for six months or more.

The reasons Bassolé finds for this behaviour are the lack of financial capital to buy large enough quantities, the difficulties in stockpiling but also problems in predicting price levels later on in the year, and especially immediately before the next harvest. Traders claim that producers tend to sell what they have stockpiled immediately before the next harvest if this promises to be good. Hence, an unforeseeable component is there. This component is aggravated by the annual rotation of the SONAGESS security stock, which is large enough to influence markets (Ibid, p 99).

Here we may add that since a majority of households are producing cereals for self-subsistence, food security considerations tend to have a great influence over markets. If a good harvest is approaching, and if a large number of household

heads take the decision to sell part of what they have saved for food security reasons, this would have a influence over markets. This might very well be the reason why cereal markets function less efficiently in this respect, and hence why great price differences occur during the year. Bassolé's results regarding price volatility show that this remained the same, or possibly even increased between the pre- and post-liberalisation periods (Ibid, p 126).

This may also be part of the reason why estimated costs of stockpiling tend to exceed the profits gained by selling later on in the year. High interest rates and high storage costs are not offset by higher prices, since there exists a downward pressure on producer prices due to the peasant practice of waiting until the last minute with sales, with the objective of not taking any unnecessary risks with their food security (Ibid, p 146).

The reason why the authorities produced conflicting statistics at different times was that they were exposed to a conflict of interests. If production statistics could be seen to be low, the country might get food aid from external donors. If the figure was too low, however, the possibility of showing persistent good results in the agricultural sector would be endangered, as would the possibility of obtaining preferential treatment in loan negotiations with the World Bank and International Monetary Fund (Interview, key informant). As aid donors questioned the figures given initially, the time when a statement of accounts had to be given to the Bretton Woods institutions got closer. After publishing a preliminary, fairly optimistic, version in late October 2000 a more pessimistic figure was given in January 2001. These figures were presented as a final version, but later a revision was done and a last and less negative figure was provided in early May 2001 (Ministère de l'agriculture, 2001, p 8). Sources close to this negotiating process deem the January figures to be the most realistic.

In sum, this chapter has argued that agricultural reforms in Sub-Saharan Africa, albeit being undertaken over two decades, have produced less than satisfactory results. Some progress has been achieved in the sense that markets have developed in food crops as well as in export crops. This market development has primarily gained consumers, through lower food prices, though this effect is not universal. There is no consensus on what has characterised development in agriculture as a sector. However, there is one trend that stand out clearly, and that is an increased prevalence of the diversification of income sources.

Burkina Faso has an agro-climatic reality of great, and possibly increasing, uncertainty. Rain levels in large parts of the country seem to have been decreasing during the last 30 years. The rain pattern has also become more erratic. On the politico-economic front, however, the situation in Burkina Faso is more stable. Reforms have been undertaken and strategies are being developed. Liberalisations in trade, dismantling of parastatal structures and improvements regarding the roles of the authorities have taken place. Results in terms of increased market integration and increased dynamics in the agricultural sector as a whole have also followed on reforms.

Hence, the study of the pattern and character of agricultural growth in such a country may provide arguments for a better understanding of the conditions for

agriculture in Sub-Saharan Africa more broadly. It is a case where it is most likely that reforms will produce expected results in terms of increased dynamics. If this is not found, it would be difficult to find results in other, less benevolent, settings.

### **1.5 Objective of the Study**

This study aims at reaching an increased understanding of factors that drive agricultural growth in countries in Sub-Saharan Africa. In order to do this, I will concentrate on a practice that is an emerging pattern in countries that have liberalised their agricultural policies, namely diversification of income sources amongst peasants. The objective is to provide an explanation of this behaviour in one country, Burkina Faso, a country that has been thorough and early in its policy reform process. The study of diversification strategies will be undertaken at micro level, since a thorough understanding of the behaviour of peasants is necessary for any understanding of macro developments in agriculture. On the basis of this study I will also pass judgement on different theories that are trying to explain agricultural development in Sub-Saharan Africa.





## 2. Contesting Growth Theories

### 2.1 Constraint by a Lack of Markets

How can agricultural growth be explained? Which factors may help an understanding of why the sector grows, or in the case of Sub-Saharan Africa, why growth is partly held back? In the following, I will describe theories that deal with these questions, and I will place them in two major traditions. First explanations coming from the economic literature will be introduced. Then, explanations that focus on particularities of the African institutional setting, and hence link up with institutional theories, will be presented.

These two groups of theories are fundamentally at odds with each other. They represent two distinct traditions in social science, each building on very different assumptions about human behaviour. The lone, atomic, actor with all his preferences given and ready beforehand stands up against the structurally determined role-fulfiller, who cannot make up his mind without interaction with others. So deep are the differences that the two groups of theories often leave different ideological traces when they are referred to in more practical development interventions. These contesting theories will both be treated throughout the study in order to see which of them has the largest explanatory power in this case. The first theory that will be described is the one that we find in the economic literature.

The neo-classical economic view on the lack of progress in Sub-Saharan agriculture stresses that a too intrusive state apparatus, in combination with the lack of functioning factor and output markets, explains weak agricultural growth. Self-regulating markets, accompanied by restrictive and knowledgeable state interventions in regulation, infrastructure and social services are seen as the remedies to search for. Agricultural producers are constrained by a lack of access to inputs, by a lack of infrastructure, and by a too heavy direct or indirect taxation of agriculture, according to this view (Berthélemy, Jean-Claude, 1995, p 41, World Bank, 1994, p 76, 245).

Reasons why markets are failing may vary. Usually some kind of “government failure” is put forward. Among economists a traditional way of perceiving the state has been to see its existence as based on some kind of contract.<sup>3</sup> However, contract based state theories are not very good at explaining why inefficient government structures appear. Hence, the assumption of a “government failure” needs to be explained by theories that see the state as based on plundering or exploitation of some kind (Lundahl, 1995, p 113).

Theories about exploitative states basically go as follows: since the state has a comparative advantage in violence, it may decide the structure of property rights and, through that authority, maximise its income. This income may be assumed to equal the income of the dominating strata in society. The state may act similarly to

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<sup>3</sup> There is, as well, an argument about the (re-) construction of social contracts and the build up of democratic polities as being the sole solution to introducing sustainable economic reforms in African countries (Olukoshi, 2003, p 268).

a monopolist company by separating different “market segments” when setting up a structure of property rights. The result will be a system that is not uniform. In extracting resources from the citizens, rulers will also have to think about minimizing the costs involved in gathering such resources. Further, rulers need to find a way of extracting resources from citizens that keeps the citizens fairly quiet. Often this may be done through investments in an ideology (Lundahl, 1995, p 113f).

Following such a theoretical trait the state has been characterised as exploitative in many different ways. One distinction is between African politics as being personalistic, patrimonial, rent seeking or bureaucratic corruption (Bates 1994, p 17f). “Personal rule”, “prebendalism” or “the politics of the belly” are other concepts used (Bratton and van de Walle, 1997, p 63). Clapham argues that neo-patrimonialism is the “most salient type of authority” in the Third World because it “corresponds to the normal forms of social organization in pre-colonial societies” (Clapham, 1985, p 49). Neo-patrimonialism is a mixture of a pure patrimonial system – where the authority is linked directly to the ruler as a person – and a rational-legal system along the lines of Max Weber’s ideal of a bureaucracy. Corruption becomes possible in such a mixed system because there are legal principles that fundamentally contradict the logic of a patrimonial system. Hence there is an in-built contradiction in the system (Lundahl, 1995, p 115).

One debate concerns the extent to which it was the colonial powers that transformed or implanted the African state. Chabal and Daloz classify the different positions in this debate into neo-patrimonialism, the hybrid state and the transplanted state (Chabal and Daloz, 1999, p 9f). The neo-patrimonial model is seen as an amalgamation of Western and African, and is described in the following terms:

“..the state is simultaneously illusory and substantial. It is illusory because its modus operandi is essentially informal, the rule of law is feebly enforced and the ability to implement public policy remains most limited. It is substantial because its control is the ultimate price for all political elites; indeed it is the chief instrument of patrimonialism. The state is thus both strong and powerless, overdeveloped in size and underdeveloped in functional terms. Although there are important differences among Black African countries in this respect, what it is significant to emphasise is that, from this perspective, the character of the state is determined by the degree to which the existing political order is institutionalised” (Ibid, p 9).

In contrast to this, the hybrid state perception stresses the success of the rise of a genuinely indigenous African state, built on Western notions. According to this view, the Western model of the state has been successfully adapted to African conditions. The third notion, finally, stresses that the transplantation of the Western state model has failed. What remains are actual states that have been transformed into something completely different from the Western model on which they were shaped.

A more straightforward interpretation of the exploitative character of African states is to perceive them as “rent seeking”. According to this view the origin of the state lies in the action of interest groups. Political leaders intervene in markets because

they are pushed to do so by organised interests. Government power is used to support the economic well-being of a privileged elite (Bates, 1984, p 18).

These states might do a number of things in order to transfer resources from the agricultural sector. They may impose heavy taxes on production, credit or inputs, they may through administrative measures lower production prices, or steer productive resources to other activities through the use of subsidies. Overvalued exchange rates may work to the detriment of agricultural exports. And the monopolistic position of parastatals may be used to extract surplus from agriculture through control over these markets (Blomqvist and Lundahl, 1992, p 122f).

Following the position of government failure, the remedy to search for is the unleashing of markets. By curbing the influence of the political sector, by strengthening the functioning of markets, and by re-establishing equilibrium prices in factor and product markets, agriculture is given space to regain dynamics and to develop. Structural adjustment programmes proposed by the World Bank have been built on this position.

“African farmers have faced the world’s heaviest rates of agricultural taxation, perhaps partly because agriculture has been such a crucial source of revenue for African governments. African farmers were taxed explicitly through producer-price fixing, export taxes, and taxes on agricultural inputs. They were also taxed implicitly through overvalued exchange rates, which reduced the prices they obtained for their exports, and through high levels of industrial protection, which raised consumer prices” (World Bank, 1994, p 76).

Hence, the remedies have been to counter and roll back these supposedly malign interventions in the market:

“Reducing the taxation of the African farmer has been a top priority in agricultural reform. And agricultural reform is high on the adjustment agenda because agriculture accounts for roughly 35 per cent of Africa’s GDP, 40 per cent of exports, and about 70 per cent of employment” (Ibid, p 77).

Alternative interpretations, based on NIE thinking, stress the lack of a functioning property rights regime, lack of functioning contractual rights (North and Thomas, 1970, p 1-17, 1971, pp 777-803) or malfunctioning credit systems (Dorward et al, 1998).

Peasants are, according to this view, hindered by the lack of functioning institutions, because of the insufficiencies of the states. It may at a first glance seem odd to group the neo-classical and the NIE positions together. But this becomes relevant, given our emphasis on differing institutional perceptions. The neo-classical view ignores institutions completely, which means that the underlying assumption is that proper institutions will develop automatically, as soon as the economy is liberalised. The NIE argument is that proper institutions have either to be developed by market actors or by the state. Even if these positions differ in some respects, they all assume that proper, market friendly, institutions are missing. There is some kind of a void that has to be filled.

The concept “institution” has been defined in many different ways. One attempt at formulating a common definition of the concept, while being used in the economic

sphere, ended up with "restrictions on behaviour affecting human beings as economic agents" (Raaschou-Nielsen, 1988, p viii). Others have spoken about a "regularity in social behaviour that is agreed to by all members of society, specifies behaviour in specific recurrent situations, and is either self-policed or policed by some external authority" (Schotter, 1981, p 11).

Hence, institutions guide the behaviour of people. They might be seen as rules, norms or enduring practices that are social in character, in that they guide human interactions. Institutions may take organisational forms, but this is not necessary, unless one refers to the fact that institutions are shared by a group of people – possibly a society – in which individuals necessarily relate to each other from different roles and positions (Blom, 1998, p 33-39).

In economic thinking, the concept may be thought of as alternative mechanisms, other than the market, for the allocation of productive resources since there are costs inherent in the use of the price mechanism (Coase, 1937, pp 386-405). This line of thinking has inspired much of the "New Institutional Economics", NIE and especially the "transaction costs" school (Williamson, 1981, p 555, 1985, 1991, 1995). According to this school, factors determining the use of institutions are:

- the degree of uncertainty surrounding a transaction;
- the frequency of transactions between two parties; and
- the extent to which parties have invested in specific assets (Dorward et al, 1998, p 14).

Dorward et al have, based on this position, undertaken an analysis of agriculture in Sub-Saharan Africa (1998). In the following, they will be treated as a representative of the NIE position in relation to agriculture in Sub-Saharan Africa.

### *2.1.1 The Character of Contracts*

Institutional economics places the transaction in the very centre of economics. It is the transfer of ownership over a good or a service that is the most fundamental part of an economic system, according to this tradition. Hence, it follows that it is central to analyse and deal with transaction costs. The analyses of transaction costs and the existence of the firm constitute one of the two major paths within the NIE. Ronald Coase and Oliver E. Williamson are the ones that first and foremost have developed the issues related to this first path. The other path of NIE dwells more on the "agency problem", i.e. the issue of how to make an agent act in the best interest of a principal. Armen A. Alchian and Harold Demsetz are the most influential writers in this latter tradition (Udehn, 1998, p 9f and 12f).

A common denominator for both these paths is the centrality of contracts. The basic question posed by Ronald Coase was why an organisation such as a firm is necessary in spite of the central assumption in classical economics that coordination of economic activities takes place only with the help of the price mechanism. The answer he found was that costs are incurred when finding out what market prices are, and also when establishing contracts. "... (C)osts of negotiating and concluding a separate contract for each exchange transaction which takes place on a market must also be taken into account.", he writes (Coase, 1937,

p 390). Coase even called these costs “contract costs”, but later these have been re-phrased into “transaction costs” by Williamson (1975, p 1).

It follows that an essential part of NIE is the analysis of contracts. These contracts are central because they constitute a basis for transactions, and they are central to both paths in the NIE. The efficiency of a contractual form may be seen not only in its ability to allocate production factors according to its relative marginal productivity, as the neo-classics would have it, but rather according to its ability to handle risk and imperfect information. It is such aspects that render e.g. sharecropping contracts efficient, according to this strand of the NIE (Stiglitz, 1974, Binswanger and McIntire, 1987). Another NIE approach is to see contracts in more than one market as interlinked. This implies that advantages from one market may be carried over to another, and that the different contracts need to be analysed together. The terms of such contracts are determined jointly (Bell, 1988, p 797, Ray and Senghupta, 1989).

Oliver E. Williamson provides a framework for the analysis of contracts (1979, p 246-254, 1981, p 555, 1985, p 52 ff, 1986, p 179-184, 1988, p 69 ff, 1995, p 225). Building on Ronald Coase’s theory of the firm, Williamson argues that hierarchies arise in order to lower transaction costs. Given certain circumstances, it becomes economically rational to replace pure market transactions with authority or governance relations internal to some kind of structure. This is the case when a) bounded rationality and uncertainty make it difficult to specify what a future contract ought to look like, and b) when transactions become risky because exchange relations are few and opportunism characterises the behaviour of the parties. Markets and hierarchies are two extreme forms and there may be a number of hybrid forms as well. Hence, the evolution of institutions to govern transactions takes place. This calls for a process analysis (Williamson, 1995, p 215 ff).

Williamson builds his explanation of the existence of different types of governance structures on some assumptions about human beings and about their environment. We have already mentioned that human beings are supposed to be following a bounded rationality, and behave, according to him, opportunistically (1975, p 21-26, 1981, p 553 f, 1985, p 44 ff, 1986, p 173 ff). Bounded rationality means that people intend to be rational, and that they economise on scarce resources. But because they have limited access to information and limited capacity to process this information, this form of rationality becomes a form in between maximisation and the weaker form “process rationality” in which only the process of making decisions is chosen in a rational way. According to the bounded rationality of Williamson, people learn by their mistakes and they adapt to new circumstances.

Furthermore, Williamson assumes that the settings in which transactions take place are characterised by three dimensions: a) uncertainty, b) frequency and c) asset specificity. When these dimensions take on high values transaction costs rise and it becomes likely that an institution, or eventually a firm, will arise. More specifically, it is, according to Williamson, various forms of governance - other than the market principle - that emerge when these dimensions take on high values. Uncertainty means that it is impossible to foresee what is going to happen. No matter how much information is available, certain things remain impossible to assign probabilities to. Frequency is a matter of how often partners undertake

transactions. It is the frequent transactions that are likely to be internalised into a firm. The issue of asset specificity has to do with how much each partner has invested in knowledge and technologies that are tailor-made either for themselves, or for the particular type of transaction undertaken. If such investments make it costly to switch to other transaction partners, high asset specificity makes partners highly dependent upon each other.

Williamson assumes uncertainty to be an underlying condition in the cases he deals with, since it is often present in sufficient degree. He then distinguishes between cases of recurrent and occasional transactions. It is in the cases of recurrent transactions where asset specificity is medium or high (“mixed” or “idiosyncratic” investments, in his terms) that “relational contracting” occurs. Relational contracting is of an “ongoing-administrative” kind and the relations take on properties of a “minisociety with a vast array of norms beyond those centred on the exchange and its immediate processes”. It is these kinds of contracts, which are not market conform, that Williamson labels “non-standard”. By studying his distinctions between different cases and contractual forms, one may note that high or at least medium values on all three of his criteria are needed if relational contracting is to occur (Williamson, 1985, p 71f, 204).

Furthermore, Williamson makes another distinction between cases of occasional and recurrent transactions. In the recurrent cases it is probable that governance of the contracts is bilateral, whereas it in the occasional case is a need for trilateral governance of the transaction, meaning that there is a third party watching over the transaction (Ibid, p 74f).

Even if Williamson’s analysis was developed in order to explain the existence and functioning of firms in well-functioning market economies, it may be extended to fit analyses of institutions in a broader sense, since the economic function of institutions is to provide a system of governance that aims at decreasing transaction costs. Given that it may be assumed that institutions arise in order to decrease transaction costs, particular forms of contracts will evolve in order to adapt to such institutions. An analysis of prevailing contracts may therefore be undertaken in order to find out about the existence of institutions and their efficiency in reducing transaction costs. Or, following the phrasing of Williamson himself, one may study “non-standard” contractual forms.

Such analyses have already been undertaken by e.g. Jaffee and Morton (1995), who have studied marketing arrangements for high value crops in Sub-Saharan Africa, and by Loader (1996), who has studied marketing of Egyptian potatoes to and in Europe. Jaffee and Morton arrive at the general conclusion that “the range of feasible institutional arrangements for commodities which pose inherent problems for quality control and vertical coordination and which are associated with economies of scale in production and/or processing will be limited to vertically-integrated systems or contract-based systems. In contrast, for commodities with less demanding techno-economic characteristics and lower investments requirements, decentralised, small-scale trading and processing operations could well be the efficient institutional norm.” (Jaffee and Morton, 1995, p 14). Loader’s findings also confirm Williamson’s basic theory regarding contracts, i.e. that the high level of specific assets explains the strong bilateral

relationships or dependence between exporters and importers in the potato trade between Egypt and Europe (Dorward et al, 1998, p 19).

The question to ask then is if such an analysis may provide answers as to the special contractual relationships that we have discerned within different areas of the agricultural sector on the Mossi Plateau? The aim of a contract is to regulate transactions, so that ownership of an asset may be redistributed in a way that is predictable and acceptable for the parties involved in the transaction. That is, a contract needs to distribute the risks involved in the transaction between the parties. It also needs to establish mechanisms for the monitoring of the execution of the transaction, or alternatively to build on certain levels of trust between the parties. These three components - redistribution of the ownership over assets, distribution of risks and monitoring/trust - must be catered for by any contract, or any contract-like arrangement. A matter of dispute is whether contracts always reflect economically efficient solutions to re-distributional problems, or whether they are subject to distortions due to unequal power distributions. To that latter question we will return.

### *2.1.2 Price and Technical Change*

The theories dealt with so far have in common that the price is the regulating mechanism for the economy. What differs between neo-classical and neo-institutional economics is the role they respectively give to institutions. But in order to deal with economic growth, theories also need to say something about technical change, because technological development is so central for the dynamic component in any economy. Reallocation of existing factors of production may increase efficiency enormously, but in the long run, technical change has an even larger potential, since it enables a qualitative change in the level of output from each combination of production factors.

There exist a number of theories dealing with the process of innovation. The most relevant, and the most frequently applied amongst these theories in the area of agricultural growth is the theory of induced innovation. We will briefly present it here, before we move on to a different strand of theories about agricultural development.

#### *2.1.2.1 The Theory of Induced Innovations*

The theory builds on the assumption that markets exist in both pre-capitalist and capitalist societies, or as Williamson has worded it "The presumption that 'in the beginning there were markets' informs this perspective" (Williamson, 1987, p 87). While the price mechanism in any market setting will ensure allocative, that is static, efficiency, it is also assumed in the theory of induced innovation that dynamic efficiency must follow from static efficiency. This means that the fact that agriculture remains underdeveloped may only be explained by some external disturbance of the price mechanism, such as government interventions or "externalities".

The most common type of growth model, the Solow-type model, assumes technical change to be exogenous, that is, given outside the model (1956). But such an

approach creates a problem. When the growth rate of the agricultural population rises, the growth rate of labour productivity will not be affected in the Solow-type model. However the level of labour productivity will be lowered, because the area cultivated per worker will decrease. This level could be raised again through savings and investments in land clearing and mechanisation, but it is more reasonable to assume that the increased dependency burden that comes with greater family size will result in a lowered savings rate (Skarstein, 2002, p 3). In the Solow-type model exogenously given technical change becomes a necessary precondition if one is to be able to explain a simultaneous growth in the labour/land ratio and in labour productivity. But the decreasing level of labour productivity coming from the “land shallowing” effect of increasing population growth rates is still there, and the model does not provide any explanation as to why technical progress and productivity growth take place in the first place. Hence, technical progress, which is the crucial factor in productivity growth, remains unexplained.

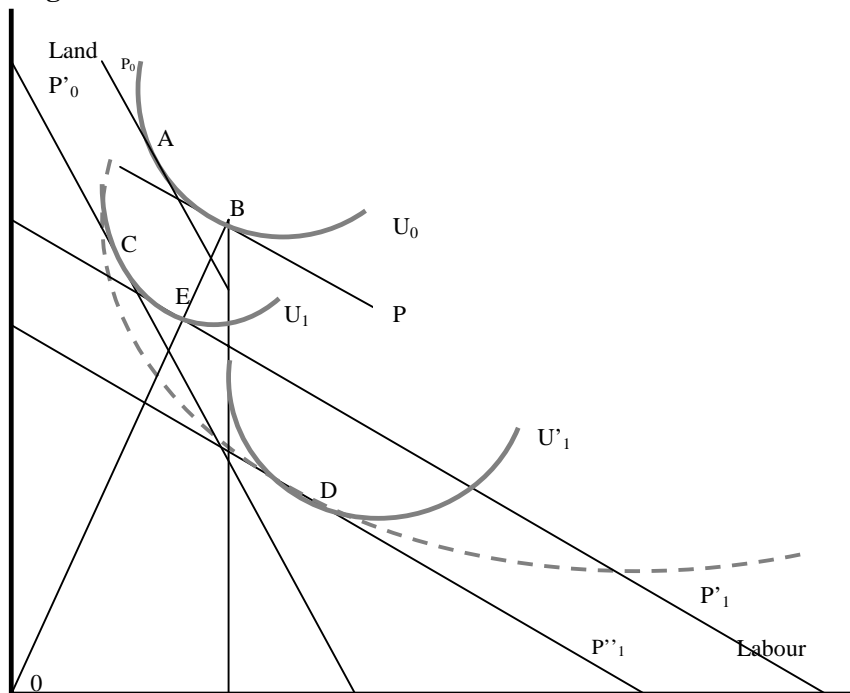
The induced innovation theory aims at solving this problem. It builds on assumptions about an efficient static resource allocation. Peasants are supposed to have combined production factors in an optimal way, and they are assumed to adopt new technologies whenever these promise higher “profits”. Agricultural research structures are also believed to act rationally in accordance with market development, as long as they are free to do so. In other words, there is no surplus labour in peasant agriculture (Hayami and Ruttan, 1985, pp 84-90, Binswanger, 1974).

The term “induced innovation” comes from John R. Hicks, who argued that there are two kinds of innovations: those that are initiated by changes in relative prices of factors of production – induced innovations – and those that are autonomous (Hicks, 1968, pp 121 ff). It is also factor price relations that play the crucial role in this theory.

An isoquant diagram may help make the theory more easily understood. We assume that there exist only two factors of production, land and labour. All the isoquants represent one unit of agricultural output that is produced with a combination of these two factors. Furthermore, we assume that the prices of these are formed on perfectly competitive factor markets, and also that agricultural products are sold on a perfectly competitive market. The isoquants in our diagram represent production functions, and these curves take on a sloped shape, that is, the first order derivatives are positive, whereas the second order derivatives are negative along the curves. We also assume constant returns to scale. The producer is in the initial state situated at isoquant  $U_0$ . What happens in the short term when for example the relative price of land increases - this might be because of population growth - is that cost line of one unit of agricultural production shifts from  $P_0$  to  $P_1$ . The point of equilibrium is moved from A (where  $P_0$  is a tangent to  $U_0$ ) to B (where  $P_1$  is a tangent to  $U_0$ ) as the producer replaces some land with more labour along the isoquant  $U_0$ . What we see is called factor substitution in neoclassical economic theory.



**Diagram 2.1:** Induced Innovation



What the theory of induced innovation says is that the process does not stop here. It goes on, as the producer starts to search for new, alternative, technologies that may have lower unit costs. The theory does not explain what drives this search; it merely assumes that the producer starts to do this. The technological frontier of existing technologies creates a curve on which the best possible new production functions are found. This frontier curve is dotted in the diagram. The different new technologies combine the factors of production in different amounts. Hence, there are different combinations to search for, depending on the different factor price ratios. If one searches a technology representing the original factor price ratio represented by line  $P$ , one ends up with the production function  $U_1$ , in equilibrium at point  $C$ . If one, on the other hand, searches a technology representing the new factor price ratio one ends up with  $U'_1$ , at point  $D$ . It is obvious, given the new factor price ratio, that this latter point is the optimal choice. At point  $D$  the lower production cost line  $P''_1$  is tangent to the isoquant, whereas at point  $E$  it is the higher cost line  $P'_1$  that is tangent to the isoquant (Hayami and Ruttan 1985, p 91, Skarstein, 2002, p 5f).

According to the induced innovation theory the change in technology does not come at the very point in time when the new technology arrives. It is rather imbalances and bottlenecks that draw the attention of researchers, entrepreneurs, public administrators and others to a particular problem that needs to be solved (Hayami and Ruttan, 1985, p 92). Translated into the diagram, the producer stays at point  $A$ , and does not move to point  $C$ . Hence it is not competition that drives the search for new production technologies. It is, according to the model, the

change in relative factor prices, which set off the search for new technologies. When a change in relative factor price occurs, the producer moves to point B, and from there, to point D. This must be so, as Skarstein points out, because it is not probable that the shift in relative factor price occurs exactly at the same time as new technologies become available. Further, if the producer had already moved to point C when the shift in the factor price ratio occurs, he would substitute factors without any further change in technology, and would then end up at point E instead of D.

The fact that the new production function is situated to the right of the line 0 – B implies that the new technology is land saving, or “labour biased”. Had the new equilibrium been to the left of this sloped line, the new technology would have been labour saving and “land biased”. Furthermore, if we draw a vertical line from point B down to the axis, we find that point D is to the right of this line as well, implying that the productivity of labour has been lowered by the shift from B to D (Skarstein, 2002, p 7).

Most often, proponents of the theory will not accept that a range of new technologies exists, and that producers may choose freely. They would rather argue that the shift in factor prices induces research institutions to develop new technologies with different factor mixes. The next step is where producers will have the choice between different technologies. However, this addition implies that the technological frontier is not the “well-behaved”, continuous and concave curve that one may choose technologies from. Research institutes and agricultural inputs industries, rather than producers, will make the choice of new technologies. The consequence for producers is that the availability of different technologies may be very limited, and there is no guarantee that they will ever be able to find the optimum point D.

Skarstein’s criticism of the theory concentrates on the fact that it is the producer that meets the shift in factor price ratio, while others make the actual choice of new technologies. Hence, there does not exist any causal link that will induce the producer to introduce a new and better technology when relative factor prices change. The reason is that there is a confusion between factor substitution at a given level of technology, and factor bias in technical progress. These are two separate processes, and there is a need to find causal links for both of them, if the theory is to hold, according to Skarstein (Ibid, p 8f).

Skarstein goes on to show that the empirical results that exist indicate that technological change in agriculture has generally been labour saving – in spite of the fact that land has become increasingly expensive in relation to labour. Citing a study by Hayami and Ruttan (sic!) he claims that only seven of 44 developing countries have experienced land saving technical change during the period 1960-1988. The majority of the countries experienced labour saving technical progress, while some saw neutral technical change (Skarstein, 2002, p 10, referring to Hayami and Ruttan, 1985, p 120-121). Yeung and Roe, and Grabowski and Sivan have undertaken further studies that all result in the same kind of conclusions. These studies all concern Japan’s agricultural history.

According to Skarstein, it is not changes in relative prices that drive technological change, but rather competition between producers. And if competition between producers is what drive technological change there would be an instant move from point A to C in the model described above, instead of the move A – B – D. It would not be possible for a producer to wait for a change in relative prices. He would rather switch to a more efficient technology as soon as this becomes available. Furthermore, because of its weaknesses, the theory of induced innovation may not explain technical change or historical processes of transformation in underdeveloped agrarian economies, which are largely pre-capitalist.

### *2.1.3 Why do Peasants Diversify?*

Having dealt with the existence of contracts and the issue of technological change, I will also dwell somewhat on how the existence of income diversification may be understood from the perspective of neo-classical or the new institutional economy. Since this is a prevailing practice, and even increasingly so, in Sub-Saharan African agriculture theories about agricultural growth need to be able to say something about it. A few attempts have also been made to deal with this practice in a theoretical way.

We may think of different explanations as to why peasants diversify. Following the idea behind insurance, diversification ought to be most prevalent in settings that are facing high risks. Diversification should also be high when non-agricultural activities are clearly separated from, and thus not dependent on, agriculture. Furthermore, actors with low levels of endowments or assets should also be diversifying to a larger extent compared to others. Following the inter-sectoral growth literature, we would, on the contrary, expect an increased diversification when agriculture is becoming more “developed“. Upstream and downstream diversification would be expected, when incomes from agriculture increase. It would also follow that actors that have more assets and endowments would diversify most, since they could afford to take the financial risks connected with new economic activities, and have greater opportunities of financing associated investments. Hence, we are so far uncertain about the empirical outcome. It is not obvious that diversification needs to be an approach primarily undertaken by poor people in order to smooth out their income variation over the year, or possibly to compensate for lower than expected harvests (Reardon, 1994, p 87).

What, then, are the objectives that peasants may have when they diversify? Reardon mentions three classes of possible objectives:

- a) the willingness, ex ante, of reducing income variability or risk;
- b) the willingness, ex post, to maintain food security in cases of low farm productivity and/or income shocks;
- c) the willingness to earn extra cash in order to finance farm investments in cases where credits are unavailable.

The last point could be generalised to the willingness of earning a larger income, regardless of whether this income is meant to be used for investments or not. Such an expansion would depend on the incomes from non-agricultural activities being

higher than incomes from farming. In their study of diversification in Burkina Faso, Reardon et al actually report that higher shares of income from non-cropping activities are systematically correlated with higher household incomes (Reardon et al, 1992, p 287, Reardon, 1997, p 739).

When people are undertaking ex ante diversification, it would be more probable that they are acting on their level of risk aversion. That is, they are actively planning to undertake a certain mix of activities, and this is done in advance, most probably building on calculations of some kind. In this calculation, constraints are most likely taken into consideration in a systematic way. When people are undertaking ex post diversification, it is probably a response to a situation into which they have been pushed or forced. They need to find new solutions in a situation where they most probably are reacting to immediate problems such as drought, harvest losses or diseases. They are probably also dealing with constraints, albeit in a more haphazard way. A third situation of diversification occurs when there exist “economies of scope” in production, or in marketing. This concept refers to a situation where the same number of inputs generate greater profits per unit if they are spread across many different outputs, as compared to a single output. Hence, this is the opposite of the better known “economies of scale”, where larger series of production generate lower costs per unit of production and hence, larger profits per unit. If, for example, land quality is highly divergent in terms of fertility, drainage and slope it would be better to cultivate different crops on each plot with distinct characteristics, rather than to mono-crop. Similarly, other economic activities than farming may be profitable while undertaken on a small scale in certain settings, meaning that income diversification may be more profitable than just undertaking one single economic activity (Barrett and Reardon, 2000, p 7f).

When undertaking empirical investigations one may distinguish between these three situations. In that way, it will be easier to discern which factors that appear in the theoretical discussion will have the largest importance. In short, such distinctions may help explain the outcomes observed.

One attempt has been made to structure the determinants of diversification at the household level into “push“ and “pull“ factors, that is into problems or opportunities (Reardon, 1994, p 89). The problem with such an approach is that some factors may have both push and pull characteristics, e.g. shifts in relative prices: If the price one gets for the ordinary crop would falls in relation to other prices - is it then the push of the falling price, or is it the pull of the rising price of other goods or services that explains the reallocation of resources into something more profitable? An alternative way of classifying the different motives behind diversification behaviour would be to separate:

- risk or volatility-related aspects;
- level of income-related aspects.

If the peasant, with some certainty, knows that non-agricultural activities will raise his or her income, then the reason for diversifying would be related to the income level. This would be the case regardless of his or her initial level of income, or endowments. If the reason for choosing non-agricultural activities instead is to reduce the unknown risk of a drop in income, then the reason is related to risk

management. We would therefore be able to differ between the ex-ante risk reduction, on one hand, and both the income-related points b) and c) above, on the other. Hence, the latter two factors are merged together into the income-related category.

#### 2.1.3.1 A Portfolio With Many Compartments

A theoretical approach to income diversification has been developed from micro-economic portfolio theory. Barrett and Reardon (2000) assume that farmers are led by the incentives and constraints they meet. Central for the understanding of farmers' decisions is labour productivity, according to them. Since wages do not exist in peasants' own agricultural production, the theory assumes the existence of a shadow wage. This shadow wage equals the marginal revenue product on the farm, adjusted for transaction costs and for risk premium. It also equals the market wage rate for off-farm wage labour, adjusted for market frictions and risk premium. However, the analysis they make leads in many different directions. Their conclusion is that depending on relative prices and marginal revenues labour-intensive cultivation, extensive cultivation into newly cleared lands as well as income diversification are possible outcomes.

What they claim is that households in a risky, or uncertain, environment have the incentive to diversify their income sources. This would especially be the case when relative returns are better in the non-farm sector, when the harvest is insufficient for the whole year, when households prefer to manage risks with ex-ante strategies and when input markets are either absent or fail. In such a setting the solution would be to allocate productive resources among different economic activities until the expected marginal utilities of each respective activity have become equal. If differences between these expected utilities remain, such a difference would be equal to the marginal difference in income risk weighted by the risk aversion level of the particular household (Reardon et al, 2000).

But since the level of risk aversion differs between poor and rich households, poor households would be more prone to diversify their income sources (Newbery and Stiglitz, 1981). Rich households, and households which have liquid assets, are less risk averse than poorer households, one may assume. This means that poor households would have stronger incentives to undertake income diversification than richer households. On the other hand, if there is a lack of functioning credit markets – as in most developing countries – the capacity of poor households to invest in non-farm activities may be very limited. So if non-farm activities have high entry barriers, or if they are initially risky, richer households would have better possibilities to engage in these activities (Reardon et al, 2000, p 13f). Hence, the poor may be more willing to diversify, but at the same time less capable to do so. Whether income diversification is undertaken more by poorer or richer households would therefore also be an empirical question.

In sum, the portfolio theory for income diversification by peasant households consists of the following components:

- The different economic activities available for peasant households carry different factor returns;

- There are barriers of entry that hinder some peasant households from adopting those activities that carry higher returns;
- While having entered the higher return activities, it is the risk aversion of households that leads them to remain with some, or all, of the lower return activities;
- The possibilities of increased specialisation in agriculture are hampered by short growing periods, the dependence on uncertain rains, low labour productivity and poorly functioning factor and product markets.

## **2.2 Constraint by Indigenous Institutions**

What we have seen so far is one side of the theoretical story, the way mainstream economic theory tries to explain agricultural growth. Now it is time to turn to the other side of the story of the contesting theories, that is, to the institutional, broader, more sociological approach. A fundamental difference between the two perspectives concerns the ways that institutions are perceived. According to the theoretical approaches belonging to the NIE tradition, the role of institutions is to assure an efficient allocation of resources. However, according to the perspective that now shall be described, institutions are created for other reasons. There might be a particular history or tradition that has led to such institutions being developed. These institutions later came to serve an economic role, but this has not been the main purpose behind the creation of them. They were created rather through a social interplay that had its own dynamics, unrelated to the actual search for efficient market institutions that would solve particular collective action problems affecting the functioning of markets.

In this perspective, institutions are seen as entities guiding human behaviour in much broader ways than the mere allocation of resources. Even in economic theory, there is also another strand of institutional theory, which is broader in its scope. When the NIE builds on traditions that regard commodities, or the utility of individuals as the most fundamental economic units, the older version of institutional economics starts with the concept of transactions (Commons, 1931, p 252). This means that the individual is no longer the ultimate focus, but rather the interplay between several individuals.

Another difference between the two theoretical perspectives is that the broader institutional approach assumes preferences to emerge through a social process, rather than belonging to the individual in isolation. It is, according to this assumption, in the interplay between individuals that preferences are transformed and created. In short, what a person wants depends on how he or she relates to other people. In this broader approach, the definition of scarcity, which guides all economic behaviour, is also seen as a societal process. Markets are thus embedded in society, and in order to understand the functioning of markets, one has to understand the beliefs, values and rules that guide that particular society (Polanyi, 2001, p 48, 279, Granovetter, 1995).

That markets are embedded in societies is a thought developed by Polanyi. His main thesis is that the “self-regulating market” promoted by economic liberalism is a utopia, unknown throughout human history, and something that will never work.

As soon as the market is set free, in a laissez-faire sense, some kind of countermove is unleashed. The countermove takes the form of “collectivist” regulation that aims at protecting human beings or nature. This is something that happens spontaneously, because society needs to protect itself against a market economy that becomes too intrusive (Polanyi, 2001, p 156). Hence, regulations and markets develop together, according to Polanyi (Ibid, p 71). A market economy needs to exist in a market society, as any economy needs to exist in, and be controlled by, a society (Ibid, p 74). The underlying reason for the embeddedness of market economies is to be found in the character of some of the central production factors. A market economy has to comprise all elements needed for industrial production, and these elements need to be organised in markets. To organise things in markets implies to deal with all the elements as if they were commodities. However, not all of these elements are commodities, according to Polanyi. Commodities are those things that are produced in order to be sold, which means that labour, land and money are not commodities:

“Labor is only another name for human activity which goes with life itself, which in its turn is not produced for sale but for entirely different reasons, nor can that activity be detached from the rest of life, be stored or mobilised; land is only another name for nature, which is not produced by man; actual money, finally, is merely a token of purchasing power which, as a rule, is not produced at all, but comes into being through the mechanism of banking or state finance. None of them is produced for sale. The commodity description of labor, land and money is entirely fictitious” (Ibid, p 75f).

As long as human activity, nature and purchasing power are dealt with according to this fiction - that they are things that could be sold - there will always be some kind of counter-movement coming from society, according to Polanyi. In this way, he also provides an argument for the existence of institutions for the regulation of some economic activities that cannot be fully understood within the neo-classic or NIE economic theories. These institutions deal primarily not with problems of collective action, but are there to serve other social purposes. Polanyi himself argues that in “tribal” societies there are no separate and distinct institutions that are based on economic motives. Furthermore, building on the works of Malinowski on western Melanesia and the works of Thurnwald on New Guinea and on economies in “primitive” communities, Polanyi argues that the motive of gain is absent in such societies. To work for remuneration or to minimise working effort are also unknown ideas. Instead, order in production and distribution is maintained by the application of the principles of *reciprocity* and *redistribution* (Polanyi, 2001, p 49f). These two concepts are, together with *exchange* that appears in market societies, to be seen as forms of integration, basic patterns of economic relations that appear in different societies. However, it is not a matter of simple aggregation of a certain form of behaviour prevailing in a society. No, these forms of integration appear because there is an overriding institutional arrangement in every society. In societies that are dominated by symmetrical groups, such as kinship groups or families, it is reciprocity that becomes the prevailing form of integration (Polanyi 1957, p 250f). By pairing off individual relations there is no longer any need for written records or administrative regulation to make the outcome fair. A complicated system of give and take of goods and services can be

built in the absence of permanent records, argues Polanyi (2001, p 51). In societies with a central node to which resources may flow in and out, such as chiefs, it is redistribution that prevails. In societies dominated by price-making mechanisms it is exchange that prevails. Polanyi defines exchange as vice-versa movements taking place between “hands” under a market system (1957, p 250 f).

In the following section, I will deal with theories that focus on institutions that are not primarily based on economic motives. It is important to note, however, that the authors of these theories have not referred to Polanyi. They have only dealt with institutions or practices that they have observed empirically. I have in spite of this found it relevant to present the reasoning of Polanyi as a framework for the following theories. In this way their common basis becomes more visible, and they all stand out more clearly against the theories that I have discussed above.

### *2.2.1 Fused Power at Local Level*

According to the first position local institutions are functioning in a specific manner, which either hinders or redirects agricultural development. One representative of this position is Mahmood Mamdani (1996, p 7f, 26, 37-48, 103). His thesis is that rural development is held back by a colonial legacy in the form of local institutions. In order to create a cost efficient, but still effective, administration, the colonial powers built on traditional chief systems and customary law. This system of “indirect rule” meant that increased power was given to chiefs. Juridical, political and economic power was “fused” in these administratively upheld positions. The changes also meant that chiefs were cut loose from accountability towards local populations.

To Mamdani, apartheid was the generic form of the colonial state in Africa. With his concept “decentralized despotism” he refers to the forms this apartheid took when transformed into a system of rule. This could be the “institutional segregation” in the thinking of Jan Smuts, the “indirect rule” of the British colonial vocabulary or the “association” of the French colonial tradition. In these systems, local powers were ethnically organised, which meant that when the anti-colonial struggle began, ethnicity was also a dimension of the resistance. It thereby became a dimension of both the problem and the solution (Ibid, p 8).

Mamdani claims that this pattern has been kept intact in most African countries after independence. The two-sided, or bifurcated, state that colonialism built was washed free of racism at the time of independence. However, it was not democratised (Ibid, p 8). Some “radical” regimes, such as Tanzania or Mozambique, tried to break with their legacy in a way that replaced the “decentralised” with a “centralised despotism”. Single party governments concentrated power in their own hands. Through their emphasis on administrative decisions and on controlling the peasantry, a clear division between urban and rural spheres of influence was upheld. “Conservative” regimes, such as Kenya or the Ivory Coast, de-racialised the modern sector of their societies, but left the traditional, customary sector intact, and even built their new power base on the continued “fused power” of local chiefs (Ibid, p 131 ff).



Peasants continued to be captured in both "radical" and "conservative" strategies, not primarily by the lack of markets, but by the structures and policies of the central government, or by local institutions and fused power in the hands of local chiefs. Noticeable about Mamdani's argument is also that he claims that Sub-Saharan Africa, due to this colonial legacy, may be treated as one analytical unit.

The most important factor that more concretely constitutes this captivity is the customary land tenure – as put into application by colonial authorities. In the search for indirect rule, two separate and distinct judiciary systems were developed. The "rule of law" was confined to the "citizens": white colonisers and part of an indigenous aristocracy. "Customary law" was confined to the "subjects" – the large majority of the population, which was mainly rural. Customary law was used as a tool for the indirect rule of the subjects. By using a judiciary that had legitimacy and was broadly accepted, the subjects could more or less rule themselves (Ibid, p 139).

In order to establish the content of customary law, information from anthropologists and from traditional chiefs was used. But the very meeting between African tradition and European juridical thinking created confusion by itself. Besides the fact that some of the informers used the opportunity to interpret tradition in a way that was beneficial to them, the meeting of the two distinct philosophical traditions resulted in distortions of the African tradition. Mamdani identifies three major distortions in the field of customary land tenure:

- (i) The fact that pre-colonial Africa had not seen the institution of private property in land led colonial lawmakers to conclude that property had to rest with the community. Hence, they created the notion of "community rights" in land, and furthermore claimed these rights to be both proprietary and exclusive. Hence, the notion of multiple rights to land, where both communitarian and individual rights could co-exist, was distorted;
- (ii) The powers of land chiefs, which hitherto had been purely ritual, were turned into proprietary rights. Land chiefs were turned into representatives of the first settler of the land, and were thus ascribed functions as distributors of land. The chiefs became the actors that were exercising the newly formed community rights to land;
- (iii) The community was identified as consisting of only the tribe. This meant that all migrants that were not members of the residing tribe were left without traditional rights of access to land (Ibid, p 139 f).

These three distortions created a situation where "...all owners of land should be found" and where "such owners must be protected against exploitation by being denied the right to dispose freely of their interests". Furthermore, it became "axiomatic that only a community could own land" (Colson, 1971, p 196, 207).

The anthropologist Elisabeth Colson referred to these distortions as "...customary, though untraditional" (Ibid, p 207).

According to Mamdani, the important thing with these distortions is that they invested powers in traditional chiefs that these chiefs had hitherto not had. A

system of indirect rule with “fused” powers given to chiefs was created. This system still exists and keeps peasants in certain captivity. In Mamdani’s words:

“It is customary access to land that defines the free peasantry in Africa as distinct from small peasants elsewhere. It is also this ongoing access that gives it autonomy and makes of it a self-reproducing free peasantry. Although the fact of this autonomy is captured in the literature on exit option, its meaning is not. For a customary access to land does not mean that such a peasantry is uncaptured; it means rather that its productive activity is only partly shaped by market forces. To subordinate that activity further to an external demand – but without turning land into a market governed commodity – is possible only through force” (Ibid, p 144).

Mamdani sees the compulsory force of the system in which the chief is the agent as a “complementary twin” of markets. This argument must be understood historically (Ibid, chapter 5). As long as peasants have had customary access to land, they have retained a certain degree of self-sufficiency. In order to break this, colonial history is full of forced labour, and forced extraction of tributes. It was local chiefs that were responsible for this extraction. Their fused power was the prime condition for such a system to work. The combination of compulsory force and market expansion also created a differentiation between rich and poor peasants. Peasants became partly dependent on the market – not least because they had to pay their tributes – but this dependency was for many of them negative (Ibid, p 146).

After independence, the fused power of local chiefs remained. And the mentalities of peasants were by then shaped by their historical experience in a way that made them wish to avoid production that could be extracted. Hence, the overall result of colonialism was to facilitate market expansion for a few rich peasants, while at the same time constraining market expansion for others (Ibid, p 147). Part of the reason for this would be that many peasants tend to prefer self-sufficiency to market production because of this colonial legacy. This is, in sum, what holds agricultural growth back, according to Mamdani.

### *2.2.2 Access through Relations*

The analysis of colonial interaction with traditional institutions is also a central theme in the writings of Sara Berry (1993, p 16f, 24-33, 145, 159). She starts with the claim that African farmers since pre-colonial times have gained access to productive resources both through market transactions and through social relationships. Such processes are, according to her, influential even today. Even if African farmers during colonial times became increasingly involved in market exchanges, this did not diminish the importance of social networks as channels of access to productive resources.

One important starting point is that the concept “tradition” cannot be understood as something static in Sub-Saharan Africa. In pre-colonial times there were a number of simultaneous interpretations of “tradition”, particularly in regard to the power of chiefs, the right to till the soil and to heritage issues. When colonial powers arrived, they however made the mistake of assuming that traditions were basically fixed, or slow moving, targets. The reason colonial powers got bogged down into

this discussion about tradition was their attempts to find a system for administration of the colonies without incurring net costs for their governments at home. Different colonial powers applied different strategies, but the overall objective was the same, expressed by Berry as "hegemony on a shoestring".

Systems of indirect rule were developed for rural areas. In the process of defining "customary law", colonial powers used a lot of different informants, both anthropologists, traditional chiefs and travellers. In reconciling different interpretations, and fixing the content and meaning of customary law, colonial powers built a number of conflicts into the system. The flexible and negotiable rules of pre-colonial times turned into rules that were highly contested. African peoples' ability to exercise influence under this period was linked to their continued participation in debates over the meaning and application of custom. This participation depended in turn on a person's social status as well as material wealth (Ibid, pp 22-42, in particular 29-32).

The tendency of colonial powers to build conflicts into the system was further emphasised by the colonial administrators' ambivalence towards African agricultural growth. In settler economies, such as Kenya, a balance had to be struck between on the one hand the development of internal production that could be taxed, and on the other hand the protection of European settlers from African competition and creating a labour force (Ibid, p 26).

Instead of being a period of transition and integration of African countries into the international system, the colonial era was characterised by increasing struggles over the meaning of "tradition" and "customary", and over rights to access productive resources. This heritage was carried over to the independent African nations. Definitions of property rights and spheres of political influence are still contested, and the basic principle is "negotiability", meaning that the interpretation of law is a social process, that transactions carry multiple meanings and that values are ambiguous. Because of this, people are more interested in keeping options open, than cutting them off. There is a willingness to participate in organisations and structures through which one's ability to participate in and influence negotiations may be strengthened. It might be preferable to keep people inside social networks than to opt for short-term access to resources (Ibid, p 13f).

Following the same kind of logic, factors such as uncertainties of weather, world markets and contemporary politics have in recent years encouraged farmers to diversify their income-generating activities, as well as their channels of access to resources. These factors have reinforced the proliferation of social networks and given them a continued importance as channels of access to productive resources (Ibid, p 16f).

Berry, in addition to this, introduces culture as an important part of the economic system. Transactions are seen as having more than one meaning, and exchanges are multidimensional. This leads to actions that seem to be perverse from a Western perspective: farmers who prefer not to register their land rights, even though it is fully possible to do so; employers who do not dismiss superfluous or unproductive workers; labourers who work without pay; lenders who do not charge interest and borrowers who pay back more than they owe etc (Ibid, p 8, 13).

This kind of behaviour is explained by the fact that status and influence in many African societies are decided by a person's ability to mobilise followers, and create social networks. These networks become assets when negotiations about access to productive resources are due. In her study of farmers in Ghana, Nigeria, Kenya and Zambia, Berry has showed that investments are not only made in a way that raises productivity in agriculture, but also to a substantial extent in a way that builds relations to others and keeps networks alive (Ibid, chapter 7, p 159-180). The argument is built upon case studies from the cocoa farming districts in Ghana and Nigeria, and on secondary sources from Kenya, Zambia and from the two first countries.

Analogous to the discussion about "negotiability", Berry argues that African peasants are neither fully captured by the state, nor fully uncaptured. The state may be described as intrusive, through its pricing, taxing and regulating behaviour, but it may not be described as hegemonic, according to Berry (Ibid, p 64-66).

African farmers in times of uncertainty do, according to Berry, tend to act in a way that increases their liquidity and that increases the flexibility in their time use. Uncertainty makes people unwilling to tie their resources to long-term investments or efforts aimed at preserving soil or water. The tendency is furthermore that land, and land-related capital, are continuously transferred with the help of social structures, whereas labour increasingly is exchanged through market mechanisms. The use of family labour or collective "labour parties" is decreasing, whereas hired labour is becoming more common. This tendency could, according to Berry, be explained through the increased practice of diversification into several marginal income-generating activities. Such practices keep people so busy that a labour shortage has appeared in rural Africa. There is thus a difference between the ways land and labour are accessed (Ibid, pp 145, 194, 200).

We may summarise this discussion by noting that the process through which farmers get access to productive resources explains agricultural growth in Sub-Saharan Africa, according to Berry. This access is guided by social rules and relations, which since colonial times are contested and subject to constant negotiations. Since farmers thus are dependent on investments both aimed at raising productivity directly, and aimed at keeping social networks going, the result is a sub-optimal agricultural growth.

### *2.2.3 Diversification as Cultural Characteristic*

While Berry mentions peasant income diversification rather briefly, Pekka Seppälä explores this phenomenon in more detail in his study of Tanzanian rural behaviour (Seppälä, Pekka, 1998a, 1998b). He develops a theory, "diversification theory", in which the central object of study is the process of lateral circulation of resources from one activity to another.

In "complex, diverse and risk-prone economies" (Chambers, 1993, pp 60-66), characterised by widespread poverty and vulnerability, economic instability, weak and exploitative states and cultural plurality, diversification of income sources is common. Another contributing arena is a micro-economic milieu where a "reproduction squeeze" is present because of outside forces, and where these

external effects are mediated through local patronage networks. What is noteworthy is that in such settings, poor, medium, as well as rich households, are all diversifying. Hence, Seppälä is not satisfied with the interpretation of diversification as being only a risk-avoidance strategy (Seppälä, 1998a, p 195ff).

The diversification theory he develops could be summarised in the following statements:

- (i) It is a systematic attempt to explain rural development through an analysis of the complexity of the local economy;
- (ii) It analyses the dynamic combination, and circulation of resources for utilitarian reasons within a social unit (be it household or enterprise);
- (iii) It is a non-essentialist theory that concentrates on contingencies, local specificities and un-orthodox practices, as well as on the deviations from unrealistic ideals of a perfect market or a single-role actor;
- (iv) It is a theory that combines the analysis of why poor, medium and rich households diversify;
- (v) It is a theory that criticises universal development theories and challenges the modernisation paradigm;
- (vi) It is a theory with limited explanatory coverage; hence it needs to be combined with other theories (Ibid, p 194f).

Further, it is a theory that claims that rural inhabitants produce a variety of goods and services efficiently in small units. Hereby they challenge the labour relationships prevailing in a capitalist economy. Peasants specialise in different activities, at the same time as they combine different activities. These combinations may or may not lead to accumulation, since some combinations are more effective than others (Ibid, p 195).

The prevalence of segmented markets, together with a social and cultural embeddedness of the economy, creates spatial and temporal variations in prices. This situation does also create great difficulties when it comes to identifying the actual production costs for a commodity or a service. Hence, the optimal production unit may look very different in different settings. In rural areas, where markets are small and very localised, an informal sector entrepreneur may be more efficient than an enterprise-sized entrepreneur. The informal sector entrepreneur is situated in a specific location, s/he can focus operations on the right season or moment, and s/he can sell small amounts to small markets. Furthermore, goods and payment forms may be specially adapted to local needs and in ways that reduce transaction costs. Hence, there may be many reasons why small scale is more efficient, and thus why diversification may be a way of accumulating resources (Seppälä, 1998a, p 195, 201).

But in order to further understand the dynamics of diversification, it is important to note that it is when people take advantage of the interfaces between different systems, or are able to convert values from one value frame to another, that accumulation occurs. Put differently, it is when people cross barriers of different kinds that this happens. To increase opportunities for accumulation of assets or productive resources, one has to invest in several kinds of capital simultaneously or serially (Seppälä, 1998a, p 193).

Seppälä makes a distinction between “simultaneous” and “serial” diversification (Seppälä, 1998b, p 248). The first form means that several activities are undertaken at the same time, the latter that one activity is abandoned in order to engage in another activity. The important point is that capital is transferred from one form, or one activity, to another.

Diversification does, according to Seppälä, put more stress on horizontal – or lateral – development than on growth per se. Increased productivity comes more often through the efficient use of labour or reduced transaction costs than through technological improvements. Direct investments aimed at raising productivity are thus foregone, while investments aimed at diversifying the production are undertaken. This is done not only in order to reduce uncertainty, but also in order to accumulate and to gain access to productive resources (Seppälä, 1998a, p 206). However, the effect is that there is not much capital formation taking place in rural Africa. Investments tend to be undertaken in relations rather than in new technology (Ibid, p 199). But rather than concluding that a low rate of capital formation hinders agricultural development, Seppälä argues that local development may take on many different forms, many of which might be unexpected (Ibid, p 195).

Seppälä also stresses that accumulation takes different forms in different cultures. He argues that different social groups aim at different ends. Economic maximisation could thus not automatically be seen as a universal human objective: “It can be postulated universally that all people want to make their life better but there can be great variation in the value judgements on what a good life actually contains. Value judgements are different in various cultures and vary also according to age, sex and other factors” (Ibid, p 216). Seppälä does, however, not go to the extreme position that the objectives of different people or social groups are impossible to compare. He introduces the concept of “cultural capital” (Bourdieu, 1977, p 177-83) to show that accumulation is taking place, but not necessarily in the same kind of capital everywhere. Diversification is special by using the conversion between different kinds of capital as a source of accumulation.

While being a strategy that has some economic merits to it, this kind of economic strategy has also another rationale seen from the village level: “Diversification is a development path in which the dependent local peasant economy manages to keep part of the agricultural surplus within its own sphere instead of pouring it into the towns” (Seppälä, 1998b, p 257).

Analysing diversification in the context of the Tanzanian society, Seppälä argues that such an economic strategy must be understood both in terms of resistance to town-based “exploiters”, which have been present in different forms during the years. But it must also be seen as a strategy for cultural expression and the upholding of a separate identity. This perspective is particularly valid at village, or local collective level. But at least on this level, diversification needs to be understood as a strategy aimed at upholding identity. “Thus, diversification is not an exit strategy to household-level subsistence, but a creative strategy for a village-level political identity”, writes Seppälä (1998b, p 261).

The argument does not stop there, however. Even if Seppälä argues that diversification may be seen as an economically rational strategy from the perspective of the individual entrepreneur (1998a, p 200-206), the frame in which he places the whole complex opens for another dynamic. When presenting his conceptual framework, he talks about the concept of “negotiated development” (Ibid, p 192). This negotiated development implies a series of encounters between different actors and groups. It is in the process of these encounters that substantive issues, power relations and also social identities are shaped. Actual development processes are thus the results of extensive negotiations between different social groups, and may hence lead to unexpected results. For instance, different attempts at stimulating development from above are met with multiple responses from local actors, from below. In sum, the question whether the peasant is rational or not must be placed in a context. And this particular context is one of constant negotiations, through which also preferences and social identities are being shaped. This is a theory that explains why rural economic life take on a certain pattern of accumulation and expansion, and in doing this it also explains why *agricultural* growth is lagging.

#### 2.2.4 *The Un-captured Peasant*

A central issue in the discussion about Sub-Saharan agricultural growth is whether the African peasant is “captured” or not. This matter was first raised by Göran Hydén, who claims that the African agricultural mode of production is characterised by the lack of constraining or structural linkages with other social classes. It is because the peasants are un-captured by the macro-economic system that development is denied in this sector. No scientific or technological approach is introduced in agriculture, since there is no fundamental pressure on peasants to raise their productivity. Furthermore, there is a need to extract a surplus from agriculture if development is to take place, according to Hydén. This is what has happened in all other societies that have developed. The only way to deduct this surplus is by integrating peasants into the larger macro-economic system, in which the state plays a decisive role (Hydén, 1980, p 31).

However, because the peasants control the means of production themselves, they are free to “exit” out of the system. In this way, the peasants have more power than the state (Ibid, p 25). This is also the reason why African states are hanging in the air – without any structural links to the economic production. The only exploitation by the state that takes place is through the taxation of peasants – and this only concerns a surplus that is already produced. It is not a kind of exploitation that might force the peasants to increase their production (Hydén, 1985, p 23).

Whereas others claim that the captivity of peasants hinders economic growth, Hydén claims the opposite: peasants must be captured if economic growth is to take place. The economy of affection exists as an economic system separate from the market economy. It is a system characterised by informal relations, and it is free from class contradictions. The market economy has not managed to break down the economy of affection. It is rather the latter that has influenced the functioning of the market economy (Ibid, p 19).

### *2.2.5 Contractual Forms*

When indigenous institutions are seen as constraining agricultural growth, a part of this is also their influence upon the formation of contracts or contractual forms. To this area we now turn. There are to my knowledge no theories or hypotheses formulated in this area, along the lines of this tradition. However, extrapolating the fundamental ideas that underpin this theoretical tradition leads to some tentative conclusions.

If institutions are formed, or have appeared in order to serve other areas than economic transactions, they will have an inner logic following the purpose, which they have come to serve. If the objective for instance is to uphold social relations, because this will increase the possibilities of having access to productive resources, the contractual form concerning that very resource will most probably be of a kind that favours social interaction, rather than the transfer of the resource.

Contractual forms that build trust will also be a possibility, if indigenous institutions are influential over economic decision-making. Such forms might then be difficult to separate from the forms that emerge in order to minimise transaction costs, since trust has that very effect. There is an overlap between the different theoretical approaches in that sense. More generally, one may say that it is difficult to characterise the kinds of contractual forms that might emerge following the influence of indigenous institutions, since it is necessary to discern which institutions are prevailing before any contractual forms may be deduced. Hence, such a judgement needs to be made later on in the analysis.

### *2.2.6 Indigenous Institutions and Technological Change*

The next link in the theoretical chain in the broader institutional perspective regards the issue of technological change. In his criticism of the theory of induced innovation, Skarstein held that it is not changes in relative factor prices that induce the introduction of new technologies, but rather competition between different producers. As competition is a matter of relations between two actors, he then opens up for a more sociological interpretation of the forces driving technological change. In industrially advanced societies, where market mechanisms are well developed, it makes sense to see competition as the driving force. In African peasant societies, it might be other relational aspects rather than competition that induce technological change. Within the field of economic sociology, there have been quite a few attempts at explaining how innovations are spread. The best-known researcher is Everett Rogers.

#### *2.2.6.1 Innovation Diffusion Needs Communication*

When innovations are being diffused, this takes place through a communication network. Diffusion research has identified a number of essential categories and aspects in this diffusion process, e.g. attributes of the innovation per se (relative advantage, compatibility, complexity, trialability and observability) (Rogers, 1995, p 250), differences between distinct categories of adopters (innovators, early adopters, early majority, late majority, laggards) (Ibid, pp 263 ff) and characters of the communication network used for the diffusion (Ibid, p 286 f).



Regarding the character of the communication network, research has shown that prevailing norms within a societal system play a role regarding the way innovations are spread. Rogers and Svenning (1969) found a difference between traditional and more progressive villages in Colombia in this respect. In each network of diffusion it is possible to discern opinion leaders that introduce new practices and techniques. These are people that have more exposure to the outside world than their followers, that have extensive interpersonal networks and that have a higher socio-economic status than their followers (Rogers, 1995, p 293 f). What was found in the Colombian villages was that in traditional villages opinion leaders were only slightly more innovative than their followers, they were also older and less cosmopolitan than their followers. In progressive villages the opinion leaders were young and innovative. The reason Rogers and Svenning found behind these differences was different prevailing social norms about the benefits of change (Ibid, p 295). When social norms favour change, the probability is that opinion leaders in the community also become innovators. This is a conclusion supported by others too. Herzog et al write the following based on a study of Brazilian villages:

“In the most traditional communities, neither the leaders nor their followers are innovative, and as a result, the community remains traditional. In the most modern communities, community norms favor innovativeness and both the leaders and the followers are innovative. In the middle range communities, where modernization is just getting underway, divisions occur and the community opinion leaders lead the way toward modernization, by trying new ideas before the other farmers in the community” (Herzog et al, 1968, p 72).

Rogers analyses these distances between different actors in the diffusion network in terms of “homophily” and “heterophily”. Homophily is the degree to which one pair of individuals who communicate are similar, and heterophily is subsequently the degree to which they are different (Ibid, p 286). If one distinguishes three kinds of actors - innovators or “change agents”, opinion leaders and followers - in this diffusion network it is important to have a high degree of homophily if the diffusion is to pass from one type of actor to the other. In traditional villages, the distance between innovators and opinion leaders is often too great. In progressive villages, it is the followers who have moved in the direction of innovativeness, in order to allow the degree of homophily to be great enough for the innovations to pass from innovators to opinion leaders and then to followers.

The role of opinion leaders in diffusion processes has also been noted in the sense that followers often chose the same kind of technical solution as they do. This was observed in a study of adoption of family planning innovations. Different villages in Korea were shown to use very different contraceptives, even though they had been exposed to the same national family planning programme. Yet, one could observe “pill villages”, “IUD villages” and one “vasectomy village”. The reason behind these differences was that opinion leaders in the different villages had opted for different techniques, and these had later been diffused to almost all the inhabitants in the village (Ibid, p 304). In diffusion networks people tend to be linked to others who are fairly close to them in geographical distance and who are homophilous. “Individuals form network links that require the least effort and that

are most rewarding” (p 311). Weak, and hence more distant, social links tend to be more important for obtaining new information (Granovetter, 1973), but in order to use such information, and start to use an innovation, stronger social links seem to be more important.

### *2.2.7 An Alternative Approach to Income Diversification*

The third sub-section in this theoretical chain concerns the question how to understand the practice of income diversification. The explanations of diversification given by micro-economic theory described above, centre on the concept of “barriers to entry”. An underlying assumption is that households are using what may be called the “logic of consequentialism”. According to this logic, every option is assessed on the basis of its consequences, and these consequences are assessed in advance, before the decision is taken. Hence, another underlying assumption is that households are to be seen as rational actors. Rationality in this sense means that actors have access to all relevant information and are able to process this information in a way so that they arrive at the optimal combination of factors of production and an optimal combination of different kinds of production. It does not follow, however, that actors need to be seen as maximisers of utility. They may just as well be regarded as optimisers of utility, working under restrictions that are linked to their different levels of risk aversion. It turns out that this risk aversion is an important part of the model of explanation. A variation within this approach to decision making is to assume process rationality, which means that limitations to decision making in the form of informational deficiencies and limited capacities to process information are taken into consideration. Rationality would then not concern the content of the decisions but rather the process of decision-making.

While applying rational approaches to decision making the decision maker may run the risk of getting trapped in path dependency. Taking a first step might mean that it is no longer possible to step back to square one, but rather that further action will have to proceed from the position already taken. This has to do with, among other things, “sunk costs”, which will make any return to the original position more costly than to continue from where one stands.

An alternative approach may be to soften the assumption about rational behaviour. In many real-life situations choices are undertaken differently. It is common to follow rules, to make experiments or to imitate in order to make decision-making easier and faster. While doing this, we may nevertheless rationalise our behaviour afterwards, in order to make a more favourable impression (Brunsson, personal communication, October 1999). A theoretical alternative to the micro-economic portfolio theory may also be constructed out of institutional theory. Starting at a general level, we may apply the “logic of appropriateness” as a contrast to the “logic of consequentialism” (March and Olsen, 1989, p 162 f). According to Christensen and Røvik (1999), the logic of appropriateness leads the actor to put three fundamental questions: What kind of situation am I facing as an actor? What is the main identity of myself and/or the structure of which I form a part? What am I, or the structure of which I form a part, supposed to do in a situation like this? Hence, this logic is focused on the concepts of roles and identities. The actor tries

to find out what is really essential in a particular role. He or she is trying to identify those factors without which one cannot claim to be for example a proper farmer, herder, citizen or businessman. But the theory also assumes that actors have multiple identities, or possibly a repertoire of identities to choose from when deciding upon a way of acting (Christensen and Røvik, 1999, p 160).

In this case, this would translate into an assumption about households seeing themselves as primarily belonging to the “peasant“ category. This would probably mean that a number of norms regarding for example the relationship to the land, the internal relations in the household and the choice of economic activities apply. These norms would then be used as a basis for decisions about the allocation of productive resources such as labour, land and capital. Those decisions would furthermore be expected to promote the upholding of the peasant household as such, rather than furthering the interests of the individual members of the household.

It is not necessarily so that “peasants” should only deal with the farming of crops. It may even be that “peasants” are supposed to diversify into other activities. But a fundamental demand would be that this is done with the intention of furthering the farming in the long run. The other activities should thus not be seen as alternative life projects, but rather as supporting the long-term development of the farm.

The reason for individuals to follow rules and procedures is that they thereby create certain identities that they find appropriate for the particular situation they are facing. Here we find another assumption of the theory: preferences are not held independently by individuals, but are created in the process whereby roles and identities are chosen and created. Preferences are thus seen as endogenic to the model. The more experienced a person is, the easier it tends to be for him or her to find proper roles to play when facing new situations. The most important difference to the logic of consequentialism is therefore that preferences and expectations about consequences are not the most important factors for making decisions about action. It is rather to find out what is appropriate, and to build a proper identity that matters when making those choices (Ibid, p 159).

When different rules, identities and situations are to be matched together, four different mechanisms might be at play, according to March (1994, p 70):

- a) experimental learning in the form of trial and error;
- b) categorisation, whereby people use their existing mental maps when combining identities and rules;
- c) recency, meaning that rules and identities that have been applied recently are more likely to be used again;
- d) comparisons with the social context of others, where either differences or similarities are emphasised.

The logic of appropriateness, when applied by e.g. Christensen and Røvik or Brunsson and Olsen (1997) is used for analysing the behaviour of actors within organisations. It is, however, a theory that may be applied to human action in institutionalised environments more broadly. The question then arises as to how the peasant household should be interpreted? Should it be equated with an individual actor, since it is a very small unit with a very high level of internal trust and

negligible internal transaction costs? Or should it be equated with an organisation because there is more than one potential actor within a household and thus internal power structures?

I argue here that it is more relevant to regard the peasant household as an organisation, since this opens up for the study of intra-household relations and structures and their adjoining power relations. These should not merely be assumed to be hierarchically ordered and smoothly functioning when it comes to the allocation of resources. However, it has to be admitted that peasants' households constitute a very particular kind of organisation. They may be seen as carrying elements both of firms and of organisations that may be described as common resource management or trustee organisations. Eco-feminists, for example, have argued as well that it is a fundamental mistake to equate the household with an individual, since this hides gender and other power relations that are of importance also to the allocation of productive resources. I am also distinguishing the household, as an organisation, from the marriage, which is an institution, and from the family. A household most often consists of more than one conjugal unit.

When the logic of appropriateness is applied to income diversification it focuses on the processes of adoption of new economic activities. Hence, the logic of appropriateness may contribute to explanations of the pace of diffusion of new economic activities, as well as to explanations of which activities are chosen. In doing this, it links up well with sociological theories of diffusion of innovation. It may also have something to say about how many different activities are chosen, and in what combinations.

### **2.3 Structuring the Agricultural Growth Debate**

With this the two contested traditions of explaining agricultural growth has been fully presented: the economic approach and the broader institutional approach. Their sub-theories on contractual forms, technical change and income diversification have also been introduced. After this fairly long theoretical exposé, we may classify these different ways of explaining developments in Sub-Saharan African agriculture along two separate lines of division. The first is whether a functioning institutional framework is considered to be present or not. The other line of division starts from the question whether peasants are captured or free to act according to their wishes or not. However, this question turns out to be problematic: Captured by whom and what? Is the captivity a hindrance or a precondition for agricultural growth? The concept becomes so blurred that we cannot separate the different positions from each other. Therefore we can use another distinction between one position where peasants are seen to be guided by what we may call regulative rules, and another where they are considered to be guided by constitutive rules. Rules of the former kind are obeyed, whereas the latter are affirmed (Scott, 1994, p 57 ff).

These different forms of rules relate to two different positions in institutionalist thinking. If institutions are thought of as something that reconciles different, independently held, preferences, the regulative rules are called for. To be guided by regulative rules means that people obey explicit or internalised societal rules

that tell them what is right or wrong. They obey these rules because the rules are reinforced by sanctions of different kinds, or by the threat of sanctions. Sanctions will then have to be imposed by some external actor, or group of actors. The role of institutions in this interpretation is to solve some kind of collective action problem.

If, on the other hand, preferences are assumed to be formed in the interplay between actors, institutions may be seen as rules that characterise the situation, that transfer information about who has authority, and about who has the right to participate in what capacity. To be guided by constitutive rules means instead that people do certain things according to a common pattern because it makes sense to them. It does so because people have a common understanding, which has been developed by communication between them. Constitutive rules define settings and inform about what is meaningful or not. Institutions are assumed to influence the preferences held by individuals. Hence, a person might in a certain situation ask herself: If I have this particular role in my family/clan/society, what is then expected from me in terms of action and opinions, given that societal objectives override my personal objectives (Rothstein, 1996, pp 135-150)? Underlying this view of human behaviour is a more culturally oriented theory (Alasuutari, 1995, p 30ff). It is thus obvious that constitutive rules form part of the "logic of appropriateness" that we discussed earlier, whereas regulative rules form part of the "logic of consequentialism".

It may be added that people following constitutive rules may very well behave in reasonable ways, even if they do not fulfil all the criteria for being "rational". Together with March (1994, p 70), I understand rationality to be a sub-sector of reason, and as such equal with other forms of reason, such as experimental learning, categorisation or comparisons with the social context of others.

An illustration of the positions on Sub-Saharan African agricultural growth that I have discussed above is presented below:

**Table 2.1:** Analytical Framework for Agricultural Growth

	<i>Strong but "wrong" institutions</i>	<i>Not functioning institutions</i>
<i>Regulative rules guide behaviour</i>	Mamdani, Berry	Dorward et al, World Bank
<i>Constitutive rules guide behaviour</i>	Seppälä, Hydén	

The Dorward et al/ World Bank position means that when market supportive institutions are built up, the hold that the state has on peasants will disappear. Market supportive institutions, such as guaranteed property rights and contract rights, together with a functioning infrastructure, credits and correct prices, will eventually make a difference.

The upper left position, of Mahmood Mamdani and Sara Berry means that even if this is present, peasants would still be constrained to use the market freely – by the

fused power of the local, traditional, structure. Only in situations where this local power structure is removed, would a prospering agriculture emerge, when market supportive institutions are built up. A question mark must be raised regarding the classification of Sara Berry's position, given that she is not explicit in her assumptions about rationality. She discusses the formation of preferences as endogenous to the process. But should this then be regarded as a situation where farmers are "rational"? As we have referred to above, rationality requests a consistency from the individual, in the sense that the individual should be able to form and hold on to individual preferences. What Berry describes is in this case at least not individual rationality, since individual preferences are revised endogenously in the system.

A clear perspective in Berry's discussion about the spread of markets and the commercialisation of agriculture is that farmers are driven by self-interest. She describes the difficulties of farmers in getting access to land, labour and other resources, in struggling with people that have more power than themselves etc. But how are we then to interpret her discussion about the captivity of peasants, where she argues that African states have been intrusive, but not hegemonic? Are peasants captured or not? Or are they only partly captured? If so, how should we interpret the argument about preferences being shaped in the process? May peasants balance different inherent meanings of an exchange against each other? Do they in some instances act as if they were captured - because they cannot invest in a way that increases their productivity - and in other cases act as if they were uncaptured and therefore decide to value increases in productivity lower than something else?

This adds up to difficulties when it comes to deciding whether peasants are guided by regulative or constitutive rules. The major impression is however that the regulative rules-perspective seems to be the dominant one. My classification of Sara Berry is built upon this.

Berry herself furthermore questions my interpretation of her description of negotiability as being first and foremost a hindrance to agricultural growth. Negotiability might just as well result in opportunities being used, she argues (personal communication 1999). But what she then underestimates is that the parallel investment in raising productivity and in keeping relations and networks alive represents a sub-optimal use of labour and capital. To make both at the same time implies that less is being done in each of the areas, as compared to specialisation in one of the areas. The fact that she mentions workers who work without pay, lenders, who lend without interest etc. is enough to support this claim.

With Seppälä and Hydén in the lower left position things are different. According to these arguments we would expect the diversification and/or the "economy of affection" to remain, even if strong attempts at introducing market reforms are made, and even if local power structures are removed. We would therefore not expect people to change their behaviour even if better market opportunities appear. They are acting on the basis of a common understanding that is different from the market logic. Such a cultural basis would not change quickly, but rather take generations to alter.

The purpose of this discussion is to describe theories that have been applied in order to explain agricultural growth in Sub-Saharan Africa. But what we already established in chapter 1 was that the clearest pattern in contemporary agriculture in Sub-Saharan Africa is that the level of income diversification is on the rise. So, in order to better understand which theories may best explain the dynamics of Sub-Saharan African agriculture, I will dwell on the issue of income diversification as well.

### *2.3.1 How to Understand Income Diversification*

The theme of ambiguity in interpretations of income diversification has been running through our discussion. Theories may not predict the empirical outcome, and it is not clear whether the logic of consequentialism or the logic of appropriateness is better at explaining the practice of income diversification. However, even if these perspectives should be complementary to each other, it is useful from an analytical point of view to separate them. Such an exercise may make it possible to at least indicate to what extent the different perspectives are relevant, and possibly too if there is any movement over time from one of the perspectives towards the other. Hence, we may from this long and rambling discussion, extract a few distinct positions. Along the lines of the logic of consequentialism, one possible reason why people diversify their income sources is the existence of barriers of entry in combination with failing factor markets. In particular, it is the absence of credits that force people to turn to a lot of different economic activities in order to acquire enough money to undertake investments. If this is the case, it may well be that productivity levels in African agriculture are increasing, while at the same time more peasants are diversifying.

Another possibility is that people diversify in order to deal with risk and uncertainty. Such uncertainty may stem from different sources. It may be international market conditions, unreliable climate, or unreliable authorities nationally or locally that create the uncertainty. Such a position is however still consistent with the logic of consequentialism. If this is the case, productivity could hardly be increasing in African agriculture. It would on the other hand explain why there has been a lack of supply response in the sector.

A third possibility is that people diversify because they would like to further their local identity politically, culturally or economically. Such a position is best understood along the lines of logic of appropriateness. It contains arguments about special relations between people and their land, the following of norms about the peasant identity and the like. Also this position would offer an explanation as to why there has been a lack of supply response.

We could also discern a fourth possibility that is related to the existence of “economies of scope”, that is that there might be profitable market niches to reach through the adoption of small-scale production or marketing. Linked to this is a possibility that assets may be accumulated and value added through the circulation of goods, services and resources from one value sphere to another.

We may structure these positions and put them in a table:

**Table 2.2:** Analytical Framework for Income Diversification

	<i>Risk avoidance</i>	<i>Income raising / accumulation with market failure</i>
<i>Logic of consequentialism</i>	Avoid putting "all your eggs in one basket"	Overcoming entry barriers and credit constraints
<i>Logic of appropriateness/ identity creation</i>	Safety rests with cultural patterns	Lateral circulation/crossing boundaries, searching for local niche markets

With this categorisation as a basis, we may undertake studies that seek to explain the behaviour of diversification. This will obviously not be an easy task, given the ambiguous dichotomy between the logic of consequentialism and the logic of appropriateness. It is however helpful to make this distinction, since it will be possible to relate different aspects of peasant household behaviour to the respective positions, and thereby gain an increased understanding.

### 2.3.2 Overlapping Analytical Fields

In this analytical framework, a clear distinction has been made between market institutions on the one hand and indigenous institutions on the other. A dichotomy has been created between the two. There exist alternative approaches, which also ought to be described in order to cover the relevant parts of the theoretical debate. For instance, the idea of Mazzucato and Niemeijer (2000) that a "cultural economy" implies a continuum between market incentives and cultural norms may be further developed and clarified by the works of Pierre Bourdieu (1995). One of the concepts he uses is "interest", and the idea is that there exist many different kinds of interest. The capitalistic interest in generating "economic" profit is but one of many forms of interest. In other fields, other kinds of interests prevail. A field is a system of relations between positions in which specialised agents and organisations compete about something they have in common (Broady, 1990, p 266, Bourdieu, 1995, pp 45ff, 136).

One example may be the field of literature where authors, critics, publishers and others compete about the definition of good literature. The actors in this field present themselves as driven by pure love to the good art. There exists of course an economic interest even in this arena, but this is denied, as the interest of promoting and producing good literature is what is talked about and acknowledged. Bourdieu writes about the parallel processes of reconnaissance and méconnaissance (recognition and misrecognition or misconstruction). In this particular field it is the interest of good literature that is recognised, and the interest of economic profits that is mis-recognised (Broady, p 200). To recognise something is to openly express and acknowledge its importance, while mis-recognition is about hiding something to the benefit of what has been recognised.



If we apply these concepts to the analysis of Mossi societies we may speak about the recognition of social relations and mutual help. This recognition is found in the field of being mossi peasants. At the same time the interest making money is mis-recognised in this field. This interest in economic profit is there at the same time as the interest in up-holding social relations. But in this setting the making of economic profits plays a subordinate role, since it is misrecognised, to use the phrasing of Bourdieu. In this way we see that cultural norms prevail in combination with market incentives.

Bourdieu himself undertook his first empirical work on peasants from Kabylia in Algeria in the 1950s. There he found honour and prestige to be of overriding importance in the social fabric. In order to achieve and keep a position in their society, peasants sought and utilised “symbolic capital” (Bourdieu, 1979, p 132, footnote 35). To themselves and to others, these peasants motivated their acts by referring to their honour. By doing this, they recognised the value of the symbolic acts, while at the same time mis-recognising the real, material, economy. It was as if people refused to face the economic reality, as if they did not see the rules of the material economy, argued Bourdieu. Exchanges were built on personal interests, while they at the same time were being officially motivated by generosity. “The logic of the gift, of the mutual assistance and the pact of honour becomes a way of surpassing or veiling the calculus of personal interests” (Bourdieu, 1961, p 95).

Another concept that may help the understanding of the behaviour of Mossi peasants is the concept of habitus. Habitus is a system of dispositions that allows the individual to think, act and orient himself or herself in the social world. The social world is still out there, and is still influential on the behaviour of people. But there is at the same time a space for individuality. The individual has habitus, something that may also be held by groups of individuals. This habitus is something that has been incorporated by individuals during their earlier life, through their experiences and upbringing. It has been incorporated into their bodies and minds, rather than being a cognitive process. And it translates into aptitude, a tendency, a predisposition for a certain way of behaviour (Bourdieu, 1995, p 18f, Broady, 1990, pp 225f, 241, 246, 298).

There is a strong tendency for continuity in habitus. Bourdieu writes about risks for Don-Quijote behaviour or hysteresis. This tendency for continuity may explain why societies do not change very quickly. People tend to create a subjective horizon of future possibilities, and thereby limit what is realistic and possible to realise (Bourdieu et al, 1963, pp 310, 338-352). But there is, at the same time, scope for change. It is not a deterministic model Bourdieu is dealing with.



## 3. Conceptual Framework and Methodology

### 3.1 Ontology and Epistemology

One objective of this study is to test different hypotheses. Judgements are to be passed on how well different theories manage to explain agricultural growth in Sub-Saharan Africa or in areas within that region. But on what basis can such judgements be made? Which ontological and epistemological assumptions are underlying in this study? Since debates about ontology and epistemology will probably never be finally resolved, what I can and should do is to be open about, and provide arguments for, my current temporary position.

Karl Popper has obviously had some influence on my thinking. This is seen from my way of structuring the research question. His critique of logical positivism, its inductivism and its verifiability criterion, is essential for the understanding of the existence of competing theories. It is not possible to build up knowledge simply by putting confirming cases beside each other and assuming the pattern found to be a general law. It is never justified to regard a general theory to be true on the basis of experience, as Popper argues (Popper, 1972, p 44f). Therefore, it does not come as a surprise that many alternative hypotheses might all gain some empirical support simultaneously.

There is, according to Popper, no such thing as an inductive process, since all situations are characterised by a certain amount of background knowledge and expectations. There is no unequivocal, certain or absolute point of departure for our knowledge. Neither common sense, nor our senses, nor reason may constitute a stable foundation for our knowledge (Flor, 1987, p 542). This is a theme that has later been expanded on by, among others, post-structuralists and post-modernists. However, a fundamental difference between Popper and post-structuralism/post-modernism is that the latter accept knowledge in an instrumental sense, seen as a tool that may be used in predicting outcomes etc, whereas Popper claims that knowledge about at least parts of a true reality is possible (Popper, 1980, p 45). Hence, Popper argues against an instrumental perspective on knowledge. I will return to such issues under my discussion about ontology later.

The attempt to refute theories by exposing them to hard tests is a better way of gaining knowledge than verification is. If a theory has survived tests in situations where it was unlikely that it would, we may conclude that this theory has a broader bearing. When attempts are made at falsification of theories in this way, they are measured against basic propositions (“grundsätze”) (Popper, 1973, pp 66f). Popper does not claim these basic propositions to be logically related to human experience or any observations made by the senses. These basic propositions are therefore theoretically open to criticism and may be refuted by the simultaneous acceptance of other basic propositions. Popper may, in spite of this, be regarded as an empiricist in the sense that he regards these (provisional) basic propositions to be decisive in the testing of theories (Flor, 1987, p 544).

But this discussion about scientific methods was never the most important aspect for Popper. His central question was rather how a criterion of demarcation from

metaphysics or unscientific theories could be constructed. In this, he reacted against the positivist principle of meaningfulness, arguing that none of the concepts of “meaning”, “sense”, verifiability or inductive confirmability is able to serve as criterion of demarcation. His argument was that this principle of demarcation was “at the same time too narrow and too wide: as against all intentions and all claims, it has tended to exclude scientific theories as meaningless, while failing to exclude even that part of metaphysics which is known as 'rational theology'” (Popper, 1963, p 253).

In its place, Popper introduced the falsifiability criterion, claiming that theoretical systems should be considered scientific only if they make assertions that may clash with observations. The testing of such systems should be done by attempts to produce such clashes, that is, attempts to refute the theories. Since falsifiability is first and foremost meant to be a criterion of demarcation, Popper did not intend to describe how science is carried out in practice. He rather intended his ideas to be normative, and to be seen as a proposition as to how science should be conducted in the most rational way (Ibid, p 255, Flor, 1987, p 544f).

The problematic thing with Popper's argument is his unconditional adherence to the principle that science should be kept apart from non-science by a clear line of demarcation. His position is understandable against the background of the political movements of his time. Nazism, Fascism and Marxism made some pretensions to be scientific. This search for a clear line of demarcation is, in spite of this, not very constructive. It is actually rather ironic that it was Karl Popper who took this position, since another part of his argument opens up for a much more constructive approach. By stressing the principle of inter-subjectivity in the search for conditions that may refute theories, he opens up for a critical discussion where problems may be solved by the application of reason and experience (Flor, 1987, p 548). If such a discussion is allowed to flourish, it may be agreed what shall be deemed to be “good science” and what shall be refuted. If arguments are tested against each other, no absolute line of demarcation is needed. It is rather the academic set-up, with peer reviews, that is the essential element.

Underlying the design of the present study is the argument that inter-subjectivity is a basic principle. A fundamental requirement of every research tradition is that it should be able to present arguments that are understandable to other research traditions, and that are also reviewed by others in an open process. Relativism in the sense that contradictory descriptions and explanations of the same phenomenon are allowed simultaneously is not accepted. It should, in principle, be possible to ultimately reach a common position - even if this may take a lot of work and time to achieve.

Another argument that I borrow from Popper is that the ultimate test of theories is empirical. Even if the quality of our observations of “reality” is subject to criticism of several kinds, there is nothing else than empirical observations of this “reality” that should serve as a basis for passing judgements about theories. “Reality” must at some stage be able to kick back at our theories. It is, however, open to the critical scientific debate to deal with the issues of how these observations should be made and how they should be judged.

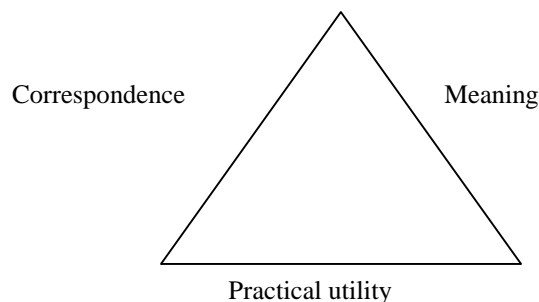
If the demarcation criterion is rejected, it follows that the falsification approach is no longer the only possible scientific method, even if it is still to be preferred. But in order to understand the scope for building knowledge, we need to discuss also ontological issues. Should we for example accept Popper's proposition that we, by accepting theories that we have tried as much as possible to refute, are getting closer to the "truth", or the "verisimilitude" (approximately "truth similarity") that Popper writes about? Is there such a thing as truth?

These are of course questions that I have a very limited ability to answer. But at least some things may be stated as a preliminary position. In order to do this we may first discuss the concept of "truth" and then say something about the nature of reality.

A fairly immediate position for someone who has had some experience of the discussion about "truth" would be that "truth" does not exist in its simple form, as a correspondence between statements about reality and reality itself. But does a rejection of this "correspondence criterion" really take us forward? In many simple situations or aspects, the correspondence criterion might still be useful. It might therefore be better to keep this, and rather try to complement the understanding of the concept.

From those who accept knowledge as a tool for working with reality, to be used for predictions and technological applications, we may borrow the understanding of truth as practical utility. Hence, truth may be understood according to a pragmatic position: if a statement helps us predict or calculate something, it will be held to be true. But this is not enough. From hermeneutics we borrow the understanding of truth as meaning, as revealing a deeper significance of reality. This understanding of the concept "truth" does not necessarily concern outer phenomena as the correspondence criterion does. It is my understanding that these three different ways of understanding truth are consistent with each other. Truth may thus be seen as consisting of three dimensions, that may appear together or separately (Alvesson and Sköldbberg, 1994, p 35 ff):

**Diagram 3.1:** The Multiple Meaning of Truth



This understanding of the concept of truth is of course dependent on some understanding of the nature of reality. For instance, the acceptance of the correspondence criterion means that reality must be seen to have some independence from the human mind, and that this independence must be stable

over some time. This is also my position. But since ontological positions are based on beliefs, the interesting thing is to make these beliefs a little more precise.

In natural science, it may be relevant for a researcher to have a position on the issue whether there exists some kind of “master plan” or not. To put it in other words: Does God exist or not? In social science, however, what is more important than this question is how the researcher perceives human beings. My perception is that in one sense, human beings are the basic agents of societies. I regard humans as the architects and agents in societies. Human beings create all theoretical concepts used in social science. However, my position is not that of “methodological individualism”. Even if societies are “founded” by the interaction of people, human action is not all there is to it. The common notion that the actor performs the action is only a half-truth, as Meyer and Scott argue. From an institutional perspective action also creates the actor (Meyer and Scott, 1994, p 19).

To be an actor, as well as to be an individual, involves practices that are guided by rules, and in that sense one may claim the “actor” as well as the “individual” to be institutions in themselves. To quote Meyer and Scott at some length:

“Modern ‘individuals’ give expression to the institutionalised description of the individual as having authorised political rights, efficacy, and competence; they consider themselves effective choosers of their occupations, investments, and consumption goods; and they willingly give vent to an extraordinary range of cultural judgements, offhandedly responding to questionnaires with their views on the polity, the economy, even the exact properties, including being, of God. Given the possibilities and inducements of the modern system, they also perform a wide range of economic, political, and cultural actions - an ex post facto can explain in great detail how their activity was carefully selected as efficient for their particular purposes. The enactment of the institutionalised theory of rational behaviour is rarely troubled by the internal inconsistencies and self-contradictions that are so typical of human action. It is precisely that this status of rational actor is a culturally supported posture that explains much specific inconsistency.” (Ibid, p 21f).

The argument, basically, is that such a thing as an “actor” does not exist independently from society or the interplay between human beings - except for situations where society in a basic sense is created, since this must be done by the action of human beings.

My view of the human being is furthermore that s/he is filled with a number of different possibilities. S/he may be both good and evil, depending on the social situation in which s/he finds her/himself, and depending on the initial characteristics of every human being.

This argument about actors being created by the action means that I also give some kind of structures a semi-ontological status. For instance, my understanding of institutions is that they are theoretical constructions made by humans. Nevertheless they “exist” in the sense that they exert some influence on the behaviour of people. The reason I see them as semi-existent is that they may not be seen as true causal factors in an explanation. The causal factor is that human beings collectively

perceive them to be there, and adhere to them. The “semi”-existence is also related to the fact that institutions may be abandoned from one time to another. But as long as people adhere to them, one cannot disregard them completely. We may instead think of it as a continuous interplay between human beings and institutions.

I mentioned earlier that there is a difference between Popper on the one hand, and post-structuralists/post-modernists on the other regarding the perception of reality. My preliminary position in this debate is that reality exists, and that truth understood as above, may be found to some extent. I reject the instrumentalist view of knowledge, according to which it is impossible to know anything “for sure”, and knowledge is only seen as a basis for practical applications (Sarup, 1989, p 118ff, 149f). There is some kind of reality “out there”, even if the reality that social sciences deal with may be temporary and partial.

However, I accept that the “linguistic turn” of post-structuralism /post-modernism has brought some new insights. When it comes to our ability to know the reality “out there” we need to be aware of our limitations regarding theories impregnating our concepts, our way of thinking and observing.

Trying to draw all this together, we may state that theories are to be seen as tools for our knowledge. They are never full descriptions and explanations of reality. They are not expressions of general, constitutive, laws. But they are not fortuitous tools either. With Toulmin, we may find some middle ground by seeing theories as similar to rules in the sense that they apply to certain settings, but not to others. What we then search for by testing theories is not in the first place their verisimilitude, but rather their applicability in certain initially defined domains (Toulmin, 1953).

The testing we aim at in this study will not therefore once and for all exclude those hypotheses that we refute on an empirical basis. It will only be possible to refute the applicability of those theories from the domains that their “founders” or “authors” have indicated. But this will still be a good result given that the theories we are dealing with here all make general claims to be valid in Sub-Saharan agriculture.

## **3.2 Methodology**

### *3.2.1 Operationalisation*

The purpose of the study is to look at conditions for agricultural growth in Sub-Saharan Africa. But at an early point it was already established that income diversification is what occurs more and more frequently amongst peasants. Hence the analysis of conditions for agricultural growth will take its starting point in an analysis of income diversification, in order to be broadened later.

To understand which factors cause diversification, we need to investigate cases where diversification occurs, and cases where it does not. Variation in the dependent variable is necessary in order to make a full analysis. If we just study cases when the phenomenon occurs, it becomes impossible to isolate the real causes. Furthermore, a central aspect of diversification to be held in mind

throughout the study is the relationship between diversification and investment. When diversification is undertaken, new economic activities are added to existing ones. It is in these formative moments that diversification is shaped. Hence, the investment behaviour of peasant households becomes a central area of interest. The very character of an investment decision is to allocate productive resources to various uses.

Investment behaviour is of interest from another aspect too. Since we are also interested in studying agricultural growth, we would like to see whether peasant household behaviour changes in situations where economic reforms have been pursued. Of course, the most immediate factor to measure when studying agricultural growth would be production output, measured in either quantity or possibly monetary value. But given that weather conditions may be expected to influence agricultural output heavily, we run a risk of missing an interesting part, that is to what extent peasants and other farmers react to changes in policy or other external factors.

Furthermore, the theories described above opened up for the discussion whether individual rationality or institutions are influencing behaviour. Such a dynamic will not be captured by a production-oriented variable. This is why instead we need variables that capture behaviour in some way. All the theories we are dealing with give investment patterns a central role. Investment behaviour may be guided either by individual rationality or institutional influence.

We would expect peasants to reveal which institutions have a more profound influence on their behaviour when it comes to investments and in the way they access resources. The resources we are looking for here are those that are vital to agricultural production, such as land, labour, inputs and capital. Investment should, however, be understood in a wider sense, covering not only the acquisition of agricultural factors of production, but also of assets that have a cultural value.

When people make investment decisions, they reveal which areas and/or which activities they believe will produce the most valuable situation for them in the future. Investment decisions are therefore also more significant indicators of the institutional structure than more short-term behaviour, such as responses to single price changes, or reactions to legal changes.

We will make a separation between investments that raise productivity in farming in a direct way by introducing new techniques or by increasing productive capacity on one hand and investments that are social to their character or involve peasant households investing in things other than agriculture on the other. The “social investments” I discuss here differ from pure consumption by being either a means of accessing resources that are needed as inputs in agricultural production or a means of raising the cultural status of a person. The dependent variable to be studied is income diversification. This income diversification should be seen from the angle of investment behaviour.

A further aspect to take into consideration is whether any accumulation of assets occurs. Does the investment pattern lead to accumulation, and if so, in what ways? This factor may be introduced in intra-case studies in order to describe the



mechanisms at work when searching for explanations for changes – or non-changes – in investment behaviour.

### *3.2.2 Extensive Studies*

Obviously, the study under consideration aims at making causal inferences about agricultural growth in SSA in general and about income diversification in particular. Given that one may intuitively think of a long row of factors that might explain investment behaviour, the immediate response would be to design an extensive study. However, we have already established in the first chapter that extensive studies in the area of economic and/or agricultural growth in Sub-Saharan Africa suffer from problems related to weak statistics. They may also be misleading since the unit of analysis may be too aggregated. As Kenny and Syrquin concluded, it seems to be impossible to make any inferences about individual countries from existing cross-country regressions. Uncertainties stem from a very weak statistical basis – data is very seldom reliable – and from a validity problem: What is actually measured by some of the variables used in the cross-country regressions?

We may, against this background, discuss the possibility of using extensive studies to explain growth in the agricultural sector in Sub-Saharan Africa. Economic growth regressions are probably the most established discourse of all, when it comes to extensive studies in Sub-Saharan Africa. Even so, we have found the results of this research to be less than convincing. We also know that the statistical basis in agricultural sectors is even less robust than data on GDP (Havnevik and Hårsmar, 1999, p 26-32). Hence, in order to draw causal inferences from an extensive study on agriculture, we would need a better statistical base than what is available from official statistics. We would furthermore need to combine any extensive study with in-depth studies, which could give more information on the mechanisms that are at play, when different factors influence the outcome in agricultural growth.

The best study design would thus have been a combination of an extensive study, based on reliable data, and an intensive study to increase validity in measurements. Since the extensive part is difficult to achieve, in particular given the limited resources available, the second best option is a comparative case study approach.

### *3.2.3 Few Cases and Causal Inferences*

Harsh criticism has been directed at attempts at making causal inferences from research designs involving few cases. Stanley Lieberson, for example, argues that this is only possible if some very restrictive conditions are fulfilled. The causal relationship must be deterministic and not probabilistic; there must not be more than one cause since it is not possible to trace co-variation between different causes; no alternative causes may be overlooked; measurement errors are not allowed (Lieberson, 1992, p 109, 114).

It is obvious that these conditions can neither be fulfilled in our case, nor in others. If they were fulfilled, this would amount to an almost certain conclusion about the causal relationship. Hence, the conclusion that Lieberson draws is logical:

“Multicausal probabilistic statements are simply unmanageable with the procedures under consideration here.” (Ibid, p 113).

Since he regards most actual causal relationships to be of this character, he judges the comparative case study method to be practically useless in this regard. There are, however, others who are of a different opinion. The basic difference between critics and proponents of causal inferences from case study comparisons concerns their respective positions as to what constitutes causality. The discussion has centred on “causal effects” versus “causal mechanisms”, where effects are observed outcomes and mechanisms are the factors and processes at lower levels that could be said to be intermediary between the cause and the effect. Mechanisms should not be understood in physical terms but rather as social processes, intentions, expectations, information, dynamics in decision making and the like.

The proponents of extensive studies have claimed that it is more important to establish causal effects, since this is possible without knowledge about the mechanisms, whereas the opposite is not possible (King et al, 1994, p 86). Proponents of intensive studies have, on the other hand, claimed that it is more important to establish mechanisms, since it is difficult to separate causal relationships from mere correlations without establishing causal mechanisms (e.g. David Dessler, referred to in Bennett, 1997, section 5).

This discussion runs the risk of going off the mark. At a theoretical level, it is possible to establish causal mechanisms before any causal effect is established. But more important than a discussion about what is ontologically more basic is the realisation that both these aspects are important when it comes to establishing causal relationships. In order to grasp the possibilities, and limits of causal inferences by comparative case studies, we have to look into what constitutes a causal relationship.

#### 3.2.3.1 What Is an Explanation?

The philosopher David Hume used the metaphor of billiards when thinking about causality (Lübcke, 1988, p 241f). When one ball hits another, the first may be said to cause the movement of the other. But what does it take to create this causality? According to his classical arguments, three criteria must be fulfilled if a causal relationship shall exist:

- There must be a contiguity in time and place between the cause and the effect, that is the two balls must meet physically;
- The cause must have priority in time over the effect, that is the first ball must start to roll before, or at least not after the second starts rolling;
- There must be a constant conjunction between the two factors; that is, there must be some mechanism whereby the movement may be transferred from the first ball to the second.

Carl Hempel, who claimed that causes together with universal laws create effects, later expanded on Hume's third criterion. However, his work in the late 1940s set off an intensive debate. Is it really universal laws that are at play, and if so, are they relevant in all instances? (Hempel, 1965, Lübecke, 1987, p 520ff). Hempel's critics have proposed singular causal theories (e.g Mackie, 1974), as well as probabilistic theories (Suppe, 1977) and counterfactual theories (Lewis, 1973) as replacements for the argument of universal laws. These different approaches have been synthesised by King et al. From their discussion on the issue we may extract four criteria that together form the basis for causality or a causal relationship (King et al, 1994, p 76-91). We need:

- An argument about the counterfactual situation: What would the outcome have been if the causal factor had not been present?
- An argument about time asymmetry: Did the cause happen before, or at least not after, the effect?
- An argument about isolation: Are we sure that the effect did not happen because of any other cause, which we did not observe?
- An argument about causal mechanisms: Can we establish the conjunction between cause and effect, which is to be found on "lower" levels of the system or unit we study?

When we take a closer look at the first criterion, it turns out to be a theoretical construction. Since we cannot replay history, and since pure experimental research designs in most cases are practically useless in social sciences, we can never be sure about the counterfactual situation. This fact has been referred to as "the fundamental problem of causal inference" (Ibid, p 79). Since we may never be absolutely sure about the counterfactual situation, we can never establish any "evidence" for a causal relationship. Our only possibility - on theoretical grounds - is to develop arguments that are as good as possible in support of our causal inference.

A case study has its strength in establishing time asymmetry, due to the possibility of studying historical processes, and in establishing causal mechanisms. This is done through in-depth intra-case inquiries. These are areas on which we have to expend extra effort, when conducting the case studies. In case studies it is, however, more difficult to find arguments about the counterfactual situation, and to isolate other causes than the ones tested for. These arguments need to be found in connecting to theories or to studies of other kinds, particularly since it is in these areas that extensive studies have their major strengths.

Intensive and extensive studies do, in other words, complement each other quite well. There are, however, often situations, such as the one under consideration here, where we have to depend on one of the two. What is needed then is an awareness of the weaknesses of intensive studies, so that we may complement the arguments we gain from this approach.

When unknown factors tend to be too many to handle with the few cases at hand, we need to link up with existing theories in order to limit the number of unknowns, and in that way strengthen our arguments about "isolation" of the cause. And when we are searching for arguments about the counterfactual situation, we are also

dependent both on theory and on other similar studies that we may link up with. These issues will be further discussed later.

### *3.2.4 Selection of Cases*

#### *3.2.4.1 Unit of Analysis*

Before we select our cases we need to sort out what we mean by a “case”. There are a number of units and levels involved when we discuss agriculture in a SSA setting: peasants, farmers more generally, villages, districts, countries, sub-regions and the region – Sub-Saharan Africa. There are several reasons why Sub-Saharan Africa is the focus. From cross-country regressions, and from evaluations of structural adjustment reforms it is clear that SSA is different from other regions in important respects. Exactly what differs is under discussion, but it is common both in research and in international politics to treat SSA as a unit. It is therefore not surprising that the theories under consideration here do the same.

A preliminary thesis is therefore that the correlations that we are looking for are generally valid for SSA. When we move to other levels, such as sub-regions, countries, districts and villages, only those that co-ordinate the relevant factors are of interest. We have for example placed heavy emphasis on economic reforms, which means that the country level is important. If the local chief system turns out to be an important determinant, districts or villages will be important, and so on. These levels are not the primary units of analysis, however. The central focus is instead placed on the local level, that is, households and individuals within households. The latter is important in order not to miss any of the dynamics taking place within the household: gender and inter-generational relations. It is the behaviour of farmers in general, and peasants in particular, that is the focus of the study, since it is certain kinds of human behaviour that are to be explained.

There are however reasons to regard villages as the units of selection. The major reason is practical: it is more efficient to study many peasants at the same place. But villages are also important units when it comes to local government, to socio-cultural factors, as well as local interpretation of customary law and traditions. This leads us to treat villages as our “cases” in which there are substantial variations as to the behaviour of individual peasants. Important factors do however differ between villages, which make it meaningful to select cases out of the variations on these variables.

#### *3.2.4.2 Criteria for Selecting Cases*

This leads us to the criteria used for selecting the cases. A common principle is to select cases out of the variation in the most important independent variable, which means that the dependent variable will be allowed to vary freely. If selection is done out of the variation on the dependent variable, systematic bias will appear. The most immediate risk with such a procedure is that some of the variation in the dependent variable is disregarded, e.g. when only democracies are studied in attempts to explain why countries become democracies (King et al, 1994, p 129).

There is also the possibility that parts of, but not the whole variation in the dependent variable disappear in the selection process. This also creates a bias, but

in a less severe way. The result will be that the causal relationship that is observed is underestimated. If one can estimate if such a bias exists, there are possibilities to compensate for it. But the only consistent way of avoiding systematic biases is to select cases out of the variation in the independent variable, according to King et al (Ibid, p 130-135).

The argument of King et al is reasonable, but limited, however. They apply a statistical logic to comparative studies, without fully recognising the limitations of this approach. This leads us back to the argument of Lieberman: it is not possible to make causal inferences from a small number of cases, since this does not allow for enough variation in all possible independent variables. When King et al argue "Selecting observations for inclusion in a study according to the categories of the key causal explanatory variable causes no inference problems" (Ibid, p 137), they are correct in the sense that this does not cause systematic biases. But the study of just a few cases still does not allow for certain inferences about causality. Unsystematic biases and pure misrepresentation might still occur.

The way to avoid these problems is to make good use of the opportunities of in-depth analysis that studies with few cases offer. The simple comparison of variation in independent variables and effects on the dependent variable is not enough, even if I will use it as part of my argument about causal relationships.

What we have discussed so far refers to situations where there is no prior knowledge about the causal relationship searched for. There are, however, other possibilities with case studies. When we are testing a theory, which makes general claims, case study designs open up for other ways of making causal inferences. If we have a case where on theoretical grounds, based on previous studies, it can be said that a particular outcome is "most likely", it will be a strong argument for rejecting a theory if the outcome does not appear. If it, on the other hand, can be said that the outcome is "least likely", it will be a strong argument in support of the theory if the outcome still appears.

When theories, as in this case, are dealing with variables at different levels, there is a risk that causal relationships differ between different contexts. Conditions might be different in other countries, or in other geographical areas. The options are then either to reduce the studied population, or to design a study that allows for both comparisons within different contexts, and between them (Collier and Mahoney, 1996, pp 56-91, 68f).

The latter may be achieved by the application of a "system design", where one tests for variables at different levels at the same time. By selecting two countries, where most variables take similar values, but where the expected causal factor differs, one may still have some possibilities of detecting causal relations, even if causality differs between the two countries. This design is called the "most similar system design".

An even stronger system design is the "most different system design". This is, however, only applicable if causality is homogeneous. By selecting two countries, where a number of factors differ, but the cause shows the same variation in both countries, a very strong argument is obtained if the effect is found to be the same in both countries. When causality is the same under such different circumstances, it is

very probable that it also takes the same form in situations where the circumstances lie somewhere in between the ones analysed.

### *3.2.5 Criteria Applied*

Given the neoclassical approach to agricultural development discussed above, the “most likely” situation would be where fundamental economic reforms have been undertaken, and private property regimes introduced. Such a situation may at the same time be characterised as a “least likely” situation for the investments in relations and social networks that Sara Berry discusses. A similar argument may also be raised about Mahmood Mamdani’s thesis, that the presence of chiefs of the colonial legacy kind would mean that we have a “least likely” case for agricultural development. This thesis may therefore be tested with case studies selected according to the “least/most likely” criteria.

Our search for these “least/most” likely cases has led us to those SSA countries that have implemented AGSECALs of the post-91 kind: Ghana, Burkina Faso and Senegal. The first two already started in 1992, whereas Senegal started in 1995. Since it probably takes time before changes materialise, it would be better to study the first two of these countries, i.e. Ghana and Burkina Faso.

Another important factor is the chief system. All three countries have undertaken some reforms of the local power structure. The most pronounced of these was implemented in Burkina Faso during the Sankara government in the period 1984-87. A recent study however claims that there is more continuity than change in local governance in Burkina Faso because of the strength of tradition. Those appointed to the new structures, the Revolutionary Defence Committees, are to a large degree recruited from the very same families that previously held the traditional positions of power (village and land chiefs) (Otayek et al, 1996, p 164 ff). Because of this, we do not find enough variation in this variable between the two countries. However, in Ghana chiefs were given increased power during the colonial period. The role of chiefs changed and became more pronounced in order for them to serve as links in the colonial administration. In Burkina Faso the role of chiefs is more given by the customary tradition, and less influenced by colonial powers. Another difference is that local peasant movements have grown much stronger in Burkina Faso than in Ghana. This could eventually have some influence over local power structures.

A comparative approach covering these two countries may be framed as a “most similar” or a “most different” approach depending on where in the respective countries cases are selected. It is not so much the differences in colonial heritage, as the geographical differences that are important here. Northern Ghana is more similar to Burkina Faso given its dry climate, whereas the areas towards the south have very different climatic and agro-ecological growing conditions. Such differences also imply differing socio-economic characters.

### *3.2.6 Independent Variables*

In the section “operationalisation”, we discussed the dependent variable, the existence of diversification. When it comes to independent variables, that may be driving diversification, we have mentioned two. The first is derived from neoclassical economic theory and relates to whether liberalising economic reforms have been implemented or not. Following the theory we may see “liberalisation” as consisting of a lot of different sub-reforms. Very neatly for our purpose, they have been packaged into what the OED (Operation Evaluations Department) of the World Bank has termed “post-1991” AGSECALs. The implementation of such reforms is therefore our first independent variable.

The second independent variable that we have already discussed is the presence of chiefs with fused authority, as described by Mahmood Mamdani. Some variation in this variable can be found between Ghana and Burkina Faso as discussed above.

There are also a number of other possible dependent variables that we need to test or in other ways take into consideration. Since the study aims at testing whether there may be a link between the income diversification observed and agricultural growth, a number of independent variables have been developed on the basis of established economic growth theory. The most influential amongst these, the Cobb-Dougllass function, singles out labour, capital, and technology as variables (Parkins, 1993, p 1016ff). In an agricultural setting this must be complemented by the availability of land, as one of the central factors of production. Hence, land, labour, availability of credits and the use of relevant farm inputs are factors that have to be dealt with. The factor capital must, however, be made more precise. Credits refer to financial capital, while input use refers to production capital and technology used. Financial capital needs as well to take the existence of migration remunerations into consideration. And as we will discuss somewhat later, there are also other forms of capital to look for.

The New Institutional Economics school would also lead us to take into consideration factors like transaction costs, and the functioning of the legal system (contract and property rights especially), but these latter variables are all constant in our case studies since they form part of the larger environment. We will thus have to deal with such factors through comparison with other cases in other environments. It is simply not possible to find a variation in these variables through different cases on the Mossi plateau.

Bassolé (2000, p 25ff) takes a completely different position than this. In his study of the Burkinabé cereals market, he defines transaction costs as storing and transportation costs, together with costs linked to the act of commercialisation. We would, however, argue that transaction costs are costs linked to the utilisation of the market mechanism, and along with Douglas North argue that it is costs related to the transfer of ownership of a commodity or a service. Such costs are difficult, or impossible, to quantify. The only possibility would be to inquire indirectly, through a mechanism such as “willingness to pay” measurements. The very idea behind the concept of transaction costs is that it refers to a “price” to pay for using the market mechanism. This “price” is therefore not captured by market prices, such as for storage and transportation costs.

From the work of Berry, but also Seppälä, Mamdani and Hydén, we realise that social relations aimed at accessing productive resources are very central. This complex may be taken in one direction through the concept “social capital”.

By social capital we mean the trust and the social norms that are shared by a large portion of the members of a particular society. It has been argued that the definition ought to go beyond the standard triad of “trust, norms and networks” and separate between “thick horizontal networks”, “trust” and “civic cooperation”. The latter is meant to be a measure of whether people in a society adhere to rules that improve the welfare of everyone even when the risk of being caught is low (such as leaving a note when they hit parked cars). But so far arguments have not been strong enough to abandon the more widely used definition. I do, however, exclude networks, since I use these indirectly in order to measure social capital (socialcapital@tome.worldbank.org). Social capital may be measured by studying the quantity and quality of associational activities (Narayan and Pritchett, 1997, pp 2-6). And it may have an impact on economic outcome through the following mechanisms:

- The efficiency and relevance of public sector interventions is increased by being more embedded in the surrounding society;
- The opportunities for cooperation in the management of common goods and resources are increased;
- Innovations may be spread more quickly through the use of more efficient channels of information;
- Transaction costs are lowered due to a lower prevalence of imperfect information;
- People become more prepared to take on risks because of better availability of information insurances.

We thus need to measure and test a social capital variable. But social capital is a contested concept that has been used in different ways. Building on classical writers and linking these traditions to modern discourses, Woolcock (1998) has tried to bring clarity into the debate. He argues that social capital should be seen as different sets of social relations that appearing alone, or in combination, might produce very different outcomes. Hence, social capital may both help and hinder economic dynamism.

The benevolent role of social capital appears if it takes on four different forms simultaneously. Woolcock distinguishes between the macro- and the micro- levels. At both these levels there is a need for a combination of embedded social ties, as well as autonomous social ties. At the community level, embeddedness (Granovetter, 1992) translates into “integration”, that is, bonds that are upheld within a certain community. Autonomy here translates into “linkage”, that is, keeping up bonds with non-community members. At the macro, or national level, embeddedness translates into “synergy”, meaning that official representatives are connected to other actors in society, e.g. industry leaders or other important market actors. State-society relations need to be vivid and dynamic for economic development to unfold. Autonomy at this level translates into “integrity”, meaning that government representatives and civil servants are governed by a professional



ethos committing them to negotiate and pursue collective goals, as opposed to narrow group interests.

Polanyi's concept of "embeddedness" has been further developed by Granovetter (1992) in order to characterise human action in the economic sphere. It contrasts both an "under-socialised" conception of human action associated with the utilitarian or neo-classical traditions, as well as with an "over-socialised" conception associated with a sociological tradition. The latter tradition claims that behavioural patterns have been internalised by human beings, and that they follow norms and rules. Embeddedness turns against both these conceptions because they assume the actor to be acting in isolation. Action should rather be understood as stemming from social relations. This means that the assumption of the rationality of the actor may be upheld, albeit bounded by the social context in which the actor lives. Hence, the isolated, individual actor of economic theory is in reality embedded in a set of social relations, which modify and direct his or her actions. It is from these relations that e.g. trust is generated and malfeasance is discouraged. But the question arises as to what kind of social relations may be beneficial for economic development.

The argument goes on to claim that both integration and linkage need to be present in order for social capital to support economic development. Furthermore, both integrity and synergy need to be present. Situations with one or more of these factors absent produce perverted economic outcomes, according to Woolcock. What we have tried to do here is to study the existence of "integration" and "linkage" at village level. This has been done through the asking of questions concerning organisational membership and the character of these organisations.

According to Sara Berry, social relations are especially important in relation to issues of land access. Inquiries into the kind of land rights prevailing are therefore also essential. When it comes to land rights there is a need to separate between customary land tenure systems, market based ownership and actual influence over decision making in land related matters (Havnevik and Hårsmar, 1999, p 76-79). Studies from Tanzania indicate that under customary land tenure systems, there is a strong bias against female ownership in patrilinear societies, due to fear of the clan losing its land. This bias is particularly pronounced in the inheritance rules. Given that the majority of the farmers are women, this possibly creates a disincentive for long-term investments in agriculture.

Under market based ownership, and in particular under the transition process to market based ownership, uncertainty often remains for women, since their inheritance rights are still questioned, and since their ability to resist such challenges depends on support from a male relative on their mother's side. In a study from Dodoma, Yngström further shows that poor males, who used to be holders of secondary rights, were also negatively affected by land registration, since their right to negotiate access to land with wealthier members of the village disappeared (Yngström, 1997, p 14-18). It may also be noted that in Kenya, where an individual land right system was introduced as early as in the 1950s, severe problems and controversies remain around land rights. One example of this is that only two percent of the women were entitled through this reform (Okoth-Ogendo, 1996).

But knowledge about the prevailing tenure system is not enough if we want to know whether the peasant has full access to, and control over the land. It is mainly women and children that expend their labour in cultivation, while in the family based production systems it is men and elders that have the largest influence over decision making, i.e. what to cultivate, how much should be marketed, who should control the receipts of sale etc.

Based on this, one variable will have to be whether market based tenure systems that give tenure rights to women are introduced or not. Further work is however needed through intra-case studies in order to find out what level or degree of influence over land use the actual producers have.

The expansion of the concept of capital into the area that has been called “social capital” implies that a similar expansion also needs to be made into the area of “symbolic” or “cultural capital” (Bourdieu, 1964a, p 146: “prestige capital”, 1964b, 1965, 1972, p 43, 1979, p 132, Broady, 1991, pp 169-201). Symbolic capital is the broader concept of the two and represents that, which of social groups is recognised as valuable and hence is given value (Broady, 1991, p 169). Hence, when a group of people place esteem, reputation, prestige, credit or confidence in something this phenomenon becomes or carries symbolic capital. One example is the concept of honour that Bourdieu treated in his studies of peasants from Kabylia in Algeria. This honour was something that the peasants needed in order to acquire and uphold positions in their society. Honour is earned through adherence to certain rules of conduct, and when acquired, it may be used to gain influence in the society. It may as well under certain conditions be transformed or exchanged into other forms of capital.

Cultural capital is in Bourdieu’s terms a more precise concept and a sub-form of symbolic capital. It has appeared when it has become possible to store symbolic assets in the form of titles, institutions, laws and orders or more broadly as written documents. In the work of Bourdieu, cultural capital is connected to societies where the written tradition is strong and where the educational system is well developed (Broady, 1991, p 171). Hence, the symbolic capital is therefore more relevant for societies such as the Mossi society in Burkina Faso, where the system of formal education is extremely weak. Such capital may be stored as well in the form of e.g. family names, which may represent prestige and power, if the particular family controls symbolic capital.

Symbolic capital, e.g. honour or prestige is not some subordinate form of power or influence; it is a real form of power by itself. Bourdieu illustrated this by when he discussed the advantages of carrying a certain family name: “...(the name)...is a symbol and a guarantee for protection, a symbol and a guarantee for honour and prestige, or rather: the name constitutes a guarantee for protection since it is a symbol for honour and prestige.” (Bourdieu, 1961, p 87).

This latter turn is important since it indicates that it is the protection and safety of carrying a family name that must be explained with the logic of honour and prestige and not the other way around. A central theme in the work of Pierre Bourdieu is that symbolic assets are intertwined with power; they form part of the very central power structure (Broady, 1991, p 197). But to study such abstract and

esoteric concepts as symbolic capital is complicated. It takes broader sociological studies to find the presence of such things as honour, and to turn this into variables is even more complicated. However, by reasoning the other way around it might be possible to observe things that may be the results, or indicators of symbolic capital. If people are looking to obtain symbolic capital they would tend to adhere as much as possible to certain given rules of honour, norms that tell them how to behave in different situations. So if symbolic capital is sought this would tend to translate into a tendency of upholding certain behavioural forms. Such a variable may be treated as a tentative indicator of symbolic capital. It may, however, also be seen as an indicator of the presence and importance of indigenous institutions and norms more generally.

A further variable to study, based on the neoclassical perspective, is the overall trend of profitability in agriculture. Developments in individual crops are not so interesting, since the possibility of switching crops exists, but what level of profitability, or possible future profitability would be needed for investments in agriculture to take place.

Access to markets is still another possible variable that we need to test for.

From the neoclassical theory one may also extract the issue of contract rights. But in reality, it is very rare that the formal right does not exist, while the practical enforcement of contracts may be much more difficult to realise. What is more important is whether people trust each other enough to enter into contracts, and also whether there exist channels through which contracts may be enforced. The trust part of this issue is covered by the social capital variable. But it would be interesting to test for “existence of channels for contract enforcement”.

### 3.2.6.1 Operationalisation of Variables

The operationalisation of the variables was done in the following way:

*Labour force, W (workers):* The household is regarded as having enough labour if:

- a) the ratio between persons working in agriculture and those dependant exceeds one, given that children under 12 are not full workers and/or
- b) the household itself claims that it has enough labour.

*Land availability, L:* The household is regarded as having enough land available if:

- a) the major part of the cultivation is taking place on fields immediately connected to the house yard or
- b) the household itself claims to have enough land.

The reason why more exact measures than these were abandoned is that different methods of cultivation create different needs for land. What we are interested in here is basically the ability of households to expand their cultivation. That ability depends on the technology used in agriculture. The demand for land is greater if you for example try to expand a plough-based cultivation than if you cultivate by hand only. In the Mossi society villages are organised so that the habitats are located immediately beside the fields cultivated - if there is enough land available for this. Further expansion is taking place through the cultivation of bush fields. The location of cultivation is thus a good indicator of land availability.

*Inputs, I:* Access to agricultural inputs is regarded as secured if the household is actually using external inputs such as artificial fertilizer, insecticides, pesticides or externally improved seed varieties.

*Credits, C:* The household is regarded as having access to credits if credits from other than informal sources are available at village level or at a reasonable distance and the household is actually making use of these credits.

*Social capital, S:* Social capital is regarded as present at the household level if the household expresses a high level of trust in other economic actors and is taking part in organised societal activities that contain people other than members of the extended family only.

*Reluctance to change, R:* Reluctance to change is considered to be of a high level if the household expresses unwillingness to test new seed varieties or new cultivating practices that are not already widely used in the village. A judgement is also made based on the way the respondents attach themselves to traditional patterns regarding issues of land distribution, relations between generations and other aspects that have a high level of cultural content in the Mossi society. This extension is made in order for the factor to be an indicator of the search for symbolic capital or of the importance of indigenous institutions.

*Diversification of income sources* is considered to be the case if:

- a) the household upholds at least three economic activities that are not cultivation or animal breeding on land which is regarded as belonging to the household or
- b) at least 20 per cent of total household income comes from another economic activity than the above mentioned.

The “upholding” of economic activities should be judged from the extent to which households actually invest resources in these activities. Hence, it should be activities that are undertaken more than occasionally. Furthermore, it should be noted that there are two aspects of income diversification: the number of activities undertaken and the share of total income earned outside farming. In order to capture both, we have operationalised income diversification in a way that includes both of them. This may run the risk of decreasing the level of income diversification as compared with other studies. However, we have set the threshold values rather low in order to avoid such a bias.

*Economic dynamism:* The household is regarded as economically thriving if a surplus has been generated over a period spanning more than two years, and/or this surplus is being used to expand agricultural activities.

From the outset, it was also planned that remunerations from migration should be included as an independent variable. It turned out, however, that this variable is very close to the variable that is to be explained, income diversification. And if the explaining factor comes too close to what is to be explained the explanatory value is lost. It was therefore decided that this variable should be included in the concept of diversification, as is done in most other studies of income diversification. That is, when a household receives remunerations from migration this is seen as one of the economic activities outside the farm that the household may diversify into. This

is the reason why “migratory activities” does not appear as an independent variable in the following analysis.

It should also be kept in mind that implementation of liberalising economic reforms within the agricultural sector, presence of a chief system and access to markets are background variables that will be dealt with through the comparison of different villages in the two countries.

### **3.3 Field Methods**

Two villages were chosen as the principal case study villages. They are both situated on the Mossi plateau of central Burkina Faso. In total five other villages were also selected as case study villages. These villages are placed in the central part of the Mossi plateau, in the north-west corner of the plateau, as well as in Ghana. They were chosen in order to find enough variation between the independent variables that were to be tested.

In each of the two principal case study villages about 30 semi-structured interviews were done, the respondents being randomly chosen. The respondents were seen as representatives of their households, and hence, household heads were interviewed when possible. In order to find out about intra-household relations and for triangulation purposes, separate interviews with other members of the household were also carried out. This means that when I talk about 30 interviews, the actual number was much higher. But these complementing interviews were shorter and less structured than the main interviews. A number of questions were put to all these respondents in order for me to be able to present a representative picture of the villages on specific aspects. Each interview was however also taken deeper in a direction that seemed to be relevant for that particular respondent. The willingness to share information and the experience of respondents guided the direction of these interviews. In this way, a number of different themes were dealt with. These special themes have afterwards been developed further by interviews with key respondents, some of whom have been found outside the villages.

Respondents were asked to give information at household level, since production decisions are taken at this level. Efforts were made not to interview only household heads, but to create a mixture where women and young people were also interviewed. Where possible, more than one member of the household was interviewed independently. These complementary interviews were used for triangulation purposes, and more importantly, for investigating internal household relations.

### **3.4 Analysis of Gathered Material**

The analysis of causes of income diversification was undertaken by using Boolean algebra. This is a method developed by electrical engineers in the 1950s in order to keep track of complex circuits, but the method has later been adapted to social science by the sociologist Charles C. Ragin. The purpose is to combine the advantages of qualitative and quantitative methods in situations where multiple and

complex causation is involved (Ragin, 1987). In order to further increase the possibilities of making causal statements this method will later be combined with the method of “process tracing”, which is undertaken within the framework of the case studies, and also by referring to research undertaken by others. But first I will start with the Boolean algebraic exercise.

The problem we are faced with here is that of “few n’s”, that is a relatively small number of observations and many possible independent variables. As described earlier I have not had the resources to undertake any wide quantitative study, but in spite of this I still claim to be able to say something about causation. The basic principle is to use a maximum of available information about the cases. In order to do this a “truth table“ of all logically possible combinations of the variables was created. This table contains all possible combinations of both the presence and absence of variables (note that variables need to be on a nominal scale in order to be used). In this way the variables are not treated in isolation from each other, but rather in a way that allows for an analysis of multiple causation.

When doing this analysis one of the independent variables, migration remuneration, was dropped since it was too close to the dependent variable, diversification of income sources. Migration might well be one of those alternative sources of income, and would thus be over represented as causation, since in reality it is part of what is supposed to be explained. What remained then was six different variables. Since there exist two possible values for each of these variables (0 or 1, absence or presence) we are left with  $2^6 = 64$  logically different possibilities.

When treating the different interviews it turned out that three interviews from each village had to be dropped, because they did not contain enough information and/or clarity. In the end 27 households from each village therefore served as the basis for the analysis, totalling 54 households.

## 4. Finding Causal Factors

### 4.1 Income Diversification in Burkina Faso

Already in the first chapter it was established that income diversification has long been a characteristic of peasant agriculture in Sub-Saharan Africa. Furthermore, when economic reforms have been undertaken this practice has been spreading even more. This chapter will concentrate on income diversification, and the practice will be analysed from an economic growth perspective. Might it be so that factors influencing growth also have an effect on the practice of income diversification? In a study from the early 1990s, based on statistics from the first half of the 1980s, Reardon, Delgado and Matlon dwelled on the issues of income diversification in Burkina Faso (Reardon et al, 1992, p 264-295). They measured income diversification in farm households in three agro-ecological zones, in order to find out whether diversification was more widespread in areas of greater hardship, as would be expected. Their results were somewhat surprising, however, since they found diversification to be more important in the two extreme zones, the Sahelian and the Guinean zones. In the Sudanian agro-ecological zone they found not only total incomes, but also the level of diversification to be lower than in the harsher Sahelian zone.

Reardon et al also established that the diversification in the Sahelian zone was driven by attempts at reducing risks, while the kind of diversification they found in the Guinean zone was mainly aiming at developing downstream market activities and finding niche markets in a situation where credits were basically lacking, that is, a strategy trying to overcome entry barriers to more profitable activities. The situation in central parts of the country, where diversification was less prevalent, was left unexplained.

The study by Reardon et al is based on a budget survey conducted by the international agricultural research institute ICRISAT during the four farming seasons 1981/82 - 1984/85. 150 households from six villages, two villages in each agro-ecological zone, were interviewed. The zone with the worst agro-ecological conditions is the Sahelian zone situated in the northern parts of Burkina Faso. Long-term average rainfall in this zone is 480 mm/year and variations over the years are larger than in the other zones. The soils are also poor when it comes to nutrients. The Sudanian zone, on the central plateau, is poor-to-intermediate in agro-ecological terms. Rainfall averages 724 mm in the long term, and is slightly more reliable than in the Sahelian zone (Ibid, p 277-280). During the 1980s and 90s the Sahelian and Sudanian zones experienced a clear decline in average rainfall levels (Bolwig, 1999, p 1, INSD, 1996, p 5-12). The zone with the best agro-ecological conditions is the Guinean in south-west, where long-term rainfall average is 952 mm/year and rain is more regular than in the other two zones. In this area cotton is grown as a cash crop.

In Burkina Faso there is a linear relationship between agricultural technology and crop yields on one hand, and the agro-ecological conditions in the respective zones on the other. This means that the better the agro-ecological conditions, the higher

yields per cultivated area are achieved. It is, however, not the case that average incomes follow this pattern. It is the middle zone that has the lowest average incomes, the smallest land plots per adult household member and the lowest level of self-sufficiency in crop production (Reardon et al, 1992, pp 277-80).

The first result established by Reardon et al was that diversification, as measured by non-agricultural share of total income, was almost equally high in the Sahelian and Guinean zones (52 and 57 percent respectively). In the medium agro-ecological zone, the Sudanian zone, the level of diversification was considerably lower (26 percent) (Ibid).

The character of diversification was very different between the Sahelian and the Guinean zones. In the agro-ecologically poorest zone, the Sahelian, diversification was much more outward-oriented with migration representing 11-25 percent of total incomes. In both the Guinean and the Sudanian zones, migration was insignificant. The authors interpreted this to mean that Sahelian diversification stemmed from poverty, stagnation and instability, whereas diversification in the Guinean zone stemmed from a more dynamic agricultural base. This, they argue, was shown by the larger content of local incomes in the Guinean zone non-agricultural activities.

Another difference between the zones was that diversification led to increased equality in the Guinean zone, but not in the two other zones. In the Sudanian zone - originally the zone with the most widespread poverty, but not with the worst agro-ecological conditions - diversification actually served to increase inequality.

The results from an ordinary least square, OLS, regression on this fairly small sample were not very clear. Only about one third of the variables tested were found significantly correlated to diversification (at a 10 percent level), and the correlations differed between the zones. The only factors studied that were significantly correlated with diversification in all three zones were the amount of food available at the beginning of the cultivation year and the size of livestock holdings. Non-farm incomes were hence compensating for harvest shortfalls. However, the interpretation of the livestock factor was harder to make. Were wealthier households less risk averse, and therefore more willing to engage in non-farm activities? Are livestock used as collateral for obtaining credits? Or was this a case of counting the by-products of livestock as non-agricultural income (Ibid, p 285ff)?

In two of the zones - the Sudanian and the Sahelian - greater landholdings were related to higher levels of diversification. For the Guinean zone, the established relationship was negative, but not significant. The authors furthermore claimed that cash cropping and diversification should be positively related in the Guinean zone, indicating the presence of a credit constraint. But this was not empirically supported, since this relationship was not significant. Another factor supporting such a claim was however that the level of savings was positively correlated with diversification in the Sudanian and Guinean zones. As mentioned above, the relationship with the size of livestock holdings may also be interpreted as a way of overcoming a credit constraint.



The conclusions provided were that the role and root of income diversification differed widely by agro-ecological zone. In the Sudanian zone it served to counterbalance the unstable local cropping economy. In the Guinean zone it stemmed from growth linkages with agriculture. The low level of diversification in the Sudanian zone was not discussed, but it was clear that the Sudanian and the Sahelian zones shared more of a common pattern (Reardon et al, 1992, p 292). This common pattern was that the level of diversification increased with increasing income, and with larger holdings of land and livestock. In the Guinean zone, the relationship was rather the opposite. The explanation hinted at was that the Guinean zone offered better developed markets and infrastructure, and particularly a greater number of labour intensive job opportunities, which poor people may easily enter (Ibid, p 283).

A study of household statistics published by the national institute of statistics, INSD, in 2001 changes the picture presented in the Reardon et al study. In the INSD study, information is stratified by province rather than by agro-ecological zone. It turns out that agricultural production does not follow rainfall levels only, which means that the Sudanian zone features great differences in production. The western part of this zone is one of the most prosperous agricultural areas of the country. With the INSD 2001 breakdown of statistics it turns out that diversification, as measured by household shares from non-agricultural incomes and transfers, is now weakly inversely related to the per capita level of agricultural production (a linear relationship with the correlation coefficient of  $-0.374$  is found). Some irregularities remain, but when non-agricultural incomes and transfers are added together a distribution of shares appear, where only the northern and the south-western regions really differ from the general pattern.

**Table 4.1:** Farm Household Income Diversification in Comparison

Region	Per cap. cereal prod. (kgs) 1999 – 2001	Household income shares from agriculture (%)	Hh inc shares fr non-agric activities (%)	Hh inc shares fr non-agric + transfers (%)	Share of hh that cultivate without plough (%)	Share of hh. lacking compost (%)	Index of utilisation of fertiliz/ compost
Centre North	163.5	32.2	28.7	37.2	75.3	87.3	5.1
Sahel	188.5	31.3	32.1	34.1	92.0	95.0	5.6
Northern	204	16.7	38.4	53.3	60.0	64.5	4.3
Centre South	242	n a	n a	n a	59.0	82.0	4.2
Centre East	260	33.9	28.4	38.0	62.0	90.5	3.9
Eastern	335	40.2	26.2	29.8	82.0	90.3	3.9
Centre West	345.5	38.2	22.2	32.2	73.3	68.3	4.2
Western	366.5	44.5	26.3	33.3	66.3	82.7	4.1
North Western	566	60.2	14.6	19.8	54.3	76.7	3.3
South Western	815	49.7	30.0	36.9	94.0	97.0	3.3

*Sources: INDS, unpublished materials, 1998, Ministry of Agriculture, several series. The fertilizer/compost index is calculated as an aggregate of how much fertilizer or natural compost is used per hectare on all crops. The figures for centre south have been partly left out since no figures representing only farm households were available for this region.*

From Table 1 we see that diversification of income sources with some exceptions follows a pattern that could be expected. That is, the more cereals that are grown per capita in an area, the less the level of income diversification. The clearest exceptions being the south-west and north regions, where diversification is much larger than in comparable regions.

We may take a closer look at this situation by analysing different kinds of available statistics. The national institute of statistics, INSD, undertook household surveys in 1994 and 1998, covering a vast array of issues. One of these issues was sources of household incomes, both monetary and non-monetary, which subsequently were added together. However, a general problem with the statistics to be presented in the following is that one series differs from other in terms of geographical partition. This makes comparisons difficult or sometimes impossible. But a careful reading of the statistics may still give some indications about trends.

**Table 4.2:** Level of Income Diversification 1994

	<i>West</i>	<i>South</i>	<i>Centre-South</i>	<i>Centre-North</i>	<i>North</i>	<i>South West</i>	<i>Ouaga/Bobo</i>
<i>Agriculture and cattle</i>	71,2	40,4	35,2	46,3	43,5	N a	1,8
<i>Enterprise, non-agric</i>	18,4	43,0	32,7	32,3	40,9	N a	44,7
<i>Salaries, commissions</i>	1,8	5,4	7,3	4,6	6,4	N a	25,3
<i>Transfers, gifts</i>	8,6	11,2	24,8	16,8	9,2	N a	28,2
<i>Total</i>	100	100	100	100	100	N a	100

Source: INSD, 1996: "Analyse des resultats de l'enquête prioritaire sur les conditions de vie des ménages", Ouagadougou, p 211.

**Table 4.3:** Level of Income Diversification 1998

	<i>West</i>	<i>South</i>	<i>Centre-South</i>	<i>Centre-North</i>	<i>North</i>	<i>South West</i>	<i>Ouaga/Bobo</i>
<i>Agriculture and cattle</i>	68,2	50,8	31,5	53,6	43,3	43,2	0,6
<i>Enterprise, non-agric</i>	10,8	28,1	35,0	18,5	47,9	38,0	51,6
<i>Salaries, commissions</i>	13,2	8,1	20,7	7,0	4,9	11,8	39,5
<i>Transfers, gifts</i>	7,9	13,0	12,7	20,9	3,7	6,9	8,2
<i>Total</i>	100,1	100	99,9	100	99,8	99,9	99,9

Source: INSD, unpublished material from "L'enquête prioritaire sur les conditions de vie des ménages en 1998".

When we compare the figures, we can immediately note that there are quite distinct differences between the two tables. It is difficult to tell whether these differences reflect methodological problems or indicate any trend. Hence, it is advisable to treat the two tables more as indicators of the situation in each province rather than as two distinct points of comparison over time.

However, if we nevertheless dare to say anything about trends on this basis, we can observe that the share of non-agricultural incomes has been decreasing in the west, south and in the centre north regions, while it has increased in the north. An alternative hypothesis regarding the reasons behind changes in non-agricultural income shares would be that it is getting more and more difficult to undertake income diversification, the longer the degradation of natural resources goes on. This might be the case since many of the non-agricultural activities available are dependent on the utilisation of natural resources. This may in particular be the case for non-agricultural activities undertaken by the poor. Such a development could very well be possible given the figures for the centre north region. In this region, non-agricultural income shares are decreasing, while transfers are on the rise. But

why should it be so in the centre north, but not in the centre south region, where the tendencies are the complete opposite? And why should non-agricultural income shares increase in the north, where natural resources are at least as low as in the central regions?

A more careful judgement of the figures in the table would then state that non-agricultural income shares are relatively low in the central regions, whereas transfers play a relatively more important role in these regions. Another conclusion might be that non-agricultural shares of total income have a tendency of adjusting more and more to a risk-avoiding pattern. The previously large deviations from the expected relationship between worse agro-ecological conditions and increased income diversification are getting smaller over time. In the 1998 statistics the relationship between agro-ecology and income diversification tends to be much more straightforward, following the expected pattern. Could it be that agro-ecological conditions are getting worse in the northern and central parts of the country, and hence peasants need to adapt more and more by diversifying their income sources there, while a more pronounced agricultural strategy is becoming possible in the western and southern parts of the country? Such an interpretation is, as we will soon see, also supported by further statistics.

A more disaggregated repartition of the 1998 figures is also available. With the country divided into ten regions the following table appears:

**Table 4.4:** Income Shares from Different Economic Activities (%)

	<i>S A H E L</i>	<i>N O R T H</i>	<i>N- W E S T</i>	<i>C- N O R T</i>	<i>E A S T</i>	<i>C- E A S T</i>	<i>C E N T R</i>	<i>C- W E S T</i>	<i>S- W E S T</i>	<i>W E S T</i>
<i>Agric.</i>	31,3	16,7	60,2	32,2	40,2	33,9	10,1	38,2	49,7	44,5
<i>Cattle breeding</i>	28,5	14,4	7,6	20,9	19,0	9,6	2,5	13,6	8,3	4,6
<i>Salaries</i>	5,9	14,9	12,0	8,7	10,6	17,6	30,1	15,0	4,6	17
<i>Non- agric.</i>	32,1	38,4	14,6	28,7	26,2	28,4	52,9	22,2	30,0	26,3
<i>Transfer and gifts</i>	2,0	14,9	5,2	8,5	3,6	9,6	4,0	10,0	6,9	7,0
<i>Other income</i>	0,1	0,6	0,4	0,8	0,4	0,8	0,4	0,9	0,4	0,7
<i>Total</i>	99,9	99,9	100	99,8	100	99,9	100	99,9	99,9	100,1

*Source: INSD, 2001: "Analyse de l'enquête prioritaire sur les conditions de vie des ménages en 1998", Ouagadougou, table 37, p 171. Figures are percentages of total household incomes, monetary and non-monetary.*

Important to note for this table is that figures for the centre and the west in particular are coloured by the fact that urban population is included in the household statistics. In the central region one finds the capital Ouagadougou (with 75 percent of the population of the province Kadiogo), and in the western region one finds Bobo Dioulasso (with 46 percent of the population in the province Houet). This makes a comparison with other figures greatly misleading. In the

other 43 provinces of the country there are only 20 that have any urban population at all. Of these 20, it is only in ten provinces that the urban population exceeds ten percent, and only in two that it slightly exceeds 20 percent of the total population in the province. Given these small shares of urban population, one may treat the regional aggregates (where four or five provinces are grouped together) that we see in the tables as representing rural households. It is only in the eastern and northern regions that we have more than one of the larger urban centres. The only regions without urban centres are the central-north and the south-western regions (INSD, 2000, pp iii-vii). However, treated with care, this information is interesting since it singles out non-agricultural incomes other than salaries and transfers, and since the statistics are regionally more disaggregated than what we saw above.

If we divide the country into agro-ecological zones, as was done in the study by Reardon et al, we find that the two regions in the Sahelian zone have non-agricultural plus transfer income shares of 34.1 and 53.3 percent (Sahel and north). In the Sudanian zone we find from east to west the following shares: 29.8, 38.0, 35.2, (56.9), 32.2 and 19.8. The value for the central region has been put in brackets, because of the heavy influence of the capital Ouagadougou on the shares. And the low shares in the more western regions may be partly explained by the relatively better agro-ecological conditions there. In the Guinean zone, we find 36.9 and 33.3 respectively (INSD, 2001, p 171). We see that the values that Reardon et al found in the early 1980s for the Sahelian (36 percent) and Guinean (41 percent) zones now are matched by the shares in many of the regions in the Sudanian zone. At that time the share of non-agricultural income and transfers in total income was 32 percent in the Sudanian zone (Reardon et al, 1992, p 281).

Reardon et al also provided figures for total income in the different zones. These figures were counted as averages for adult equivalents. Incomes were highest in the Guinean zone (45 800 F CFA), followed by the Sahelian zone (38 500) and then the Sudanian zone (23 600), which was surprising, since the Sahelian zone has the worst agro-ecological conditions of the three (Ibid, p 281). In 1998, no figures for incomes were given, but however they were given for household expenditures. The problem is also in this case that urban households are included, which is why the west and the central regions have to be excluded. The incomes generated in Bobo Dioulasso and Ouagadougou make any comparison with the other regions heavily biased. Figures from the other regions are presented in the following table:

**Table 4.5:** Total Household Expenditures (annual averages, FCFA)

	Sahelian zone		Sudanian zone					Guinea zone
	Sahel	North	East	Centre-East	Centre-North	Centre-West	North-West	South-West
Aver. Income	642063	670821	602039	407144	508730	750673	667113	456732
Money (%)	70,4	71,7	62,7	66,7	60,8	72,1	68,5	48,6

Source: INSD, 2001: "Analyse de l'enquête prioritaire sur les conditions de vie des ménages en 1998", table 90, p 205.

From this table we may draw the conclusion that differences are no longer that great between the different agro-ecological zones. What is maybe surprising is that the south-western region presents such low figures. A comparison with the figures representing income shares above shows that low shares coming from cattle breeding tend to give low levels of total expenditure. The expansion of the cattle market has probably led to a changing regional distribution of expenditures during the last 20-year period.

What we have seen changing during the last 20 years are also some shifts in income shares coming from money transfers. In the north it may have gone down somewhat, even if it is still a high share in the region around Yatenga (northern region). But in the central parts of the country it has clearly increased, if one makes a comparison with the situation 20 years ago. Trends the last few years are more difficult to establish, as I have discussed above.

So, to summarise: what we have been able to extract from these disparate statistics are two major findings:

- a) there is a trend towards income diversification becoming a more straightforward strategy for risk reduction in most parts of the country. Levels of income diversification tend to follow agro-ecological conditions more than they did 20 years ago;
- b) incomes from migration tend to become more important shares of total incomes in the central parts of the country, while it remains the same in the northern parts of the country.

Taken together, these findings indicate that there seems to be a long-term pressure that forces the population in central parts of the country to adopt the same kind of strategies that people in the northern parts have done already. There is an underlying pressure on natural resources that tends to lead to a change in economic behaviour.

But if this is the long-term, underlying trend, what is happening in a shorter-term perspective? How are peasants adjusting to changes of different kinds that they are exposed to? And are the figures given here large or small? What would be relevant levels of diversification given the opportunity set? And is it possible to strike the balance between diversification and specialisation in such a way that accumulation

of resources becomes possible? I will dwell on these issues by investigating the dynamics at a more disaggregated level.

I have chosen case study sites on the “Mossi Plateau”, that is in the central regions of the country. In these regions poverty is more prevalent than in other areas. It is also here that the effects of climate change are most clearly felt, since the northern areas have been exposed to small and irregular rains for a longer period of time. We may also note that in particularly the centre north region, diversification is relatively low, given the other characteristics of this region. The reason for selecting this area is also that the Reardon et al study found a low level of income diversification here – a fact that they left more or less unexplained. Recent statistics indicate that this picture may have changed. If so, what are then the dynamics in action on the Mossi Plateau? How should we understand what is happening?

## **4.2 Case Study Villages**

After this discussion about previous studies I will now return to the empirical study conducted on the Mossi Plateau in the central parts of Burkina Faso. The villages of Gandaogo and Zambanga were selected as field sites because of their character as normal villages at the Mossi Plateau. Both have access to medium sized markets at a decent distance, both are inhabited by Mossi and other ethnic groups, both have been exposed to the influence of development NGOs and both are of the same size. Situated further south, Gandaogo has a slightly higher average annual rainfall than Zambanga. The most obvious result of this difference being that cultivation of the cash crop cotton is much more prevalent in Gandaogo.

The objective of chapters 4 and 5 is to provide an explanation of why peasants on the Mossi Plateau diversify their income sources. Following the discussion in the methodology section, this explanation will consist of four different arguments, and the strength of the explanation should thus be judged by putting all these four arguments together. First I will start by providing arguments about the counterfactual situation, that is, what would have happened if the factor we isolate had not been present. Together with this I will also provide arguments about the isolation of the factor that we single out from other factors. These two tasks will be undertaken by using Boolean algebra, as described in the methodology section, a method that combines qualitative research methods with quantitative methods. The arguments about isolation are also built by referring to other existing studies. In that sense, I have already started to develop the argument, by referring to the Reardon et al study (1992). But now let us turn to the empirical material.

**Map 4.1:** The Mossi Plateau in Burkina Faso and Case Study Villages



Gandaogo is situated some 15 kilometres south of the provincial capital Zorgho, in the province of Ganzourgou. This means that Gandaogo in addition to its own market, which is held every third day, also has access to the larger market in Zorgho, where there are retailers who work on a continuous basis, as well as a regular market day every third day.

The number of inhabitants in Gandaogo is according to the official statistics 2 831 people (INSD, 2000, p 55). As in other Mossi villages, Gandaogo stretches out widely, with its households being formed by five to ten cottages surrounded by a wall. Attached to each household are agricultural lands, and the distance between different households is usually 50 to 100 metres or more. In each household there is one household head. In larger Mossi household units, there might normally be sub-units. The pattern in Gandaogo is somewhat different. Here it is rare that younger brothers stay in the household headed by their older brothers. They would rather leave and form their own units when they marry (Ancy, 1983, pp 44ff). The number of inhabitants in each household varies widely, but there might be up to 80 people living in one court. This is however rare in Gandaogo where household units rather stay within the range of five to twenty people.

The majority of the inhabitants are Mossi, but there are also Peuhl in Gandaogo. One very rough indicator of the standard of living in Gandaogo is that very few buildings are square with a tin roof. The large majority are round clay cottages with a straw roof. Centrally placed in the village, behind the market place is a river basin. This river is, however, totally dry from October/November until the rain



starts again in May/June. There have been efforts undertaken to construct a dam, but this dam is seen as a failure, since the construction has not been strong enough to retain any larger amounts of water. From the river basin and the market, the village spreads in all directions. In the more central parts, land is somewhat more sloping. However, these slopes are not very steep. Soils are in general sandy, but richer in minerals closer to the river basin.

Zambanga is a Mossi village situated some five kilometres from the town Boulsa. There is no major water-point nearby, except for a few, dugout dams that are filled with water almost throughout the year. The number of inhabitants is officially 3889 people (INSD, 2000, p 130), who are spread over 275 different households. The main road divides the village, with the market place on one side and a meeting place outside the house of the village chief on the other. A comparison with Gandaogo indicates that the social gaps are greater in Zambanga. Centrally placed in the village are lamps driven by solar electricity. Around these points the courts have quite a number of square houses with tin roofs. The families living in these courts have relatives outside the village that have succeeded and are supporting their families back in Zambanga. On the outskirts of the village, poverty is however more prevalent than in Gandaogo. The lack of collaboration between households is clearly visible, since these differences not only continue to exist but deepen during years of drought. This is also reflected in the discussion on social capital below.

Peasants in the two villages use similar production strategies. The food crops cultivated are millet and sorghum, and sometimes corn. The first two crops are used for making a porridge, "tô", that is the staple food. Millet and sorghum are seldom sold. It is only when peasants manage to stockpile cereals for several years, or in the case of an emergency, that these crops are traded. In addition to this, some cash crops are cultivated, typically green beans or peanuts. A few peasants also cultivate tobacco, calabashes or potatoes. In Gandaogo cotton has also been re-introduced quite recently. Historically, another variety of cotton was cultivated and a tradition of weaving existed in the village. Nowadays cotton is cultivated for sale in total collaboration with the marketing company SOFITEX, which also provides the inputs.

The cultivation is combined with cattle breeding and the raising of small stock. Traditionally, one ethnic group, the Peuhl, used to deal with all the breeding, but over the years breeding and cultivation have been integrated so that nowadays both Peuhl and Mossi engage in both activities. Manure from the animals is used to fertilize the lands, while animals live on remnants of plants harvested. Animals also serve as a source of security in times of hardship, either as food, or more commonly as a source of income since they often are sold when a need for cash appears. Zambanga is the village of the two that is most specialised in cattle breeding (Interviews, key informants).

In a majority of households, some members, typically younger men, migrate seasonally. During the dry season they leave in order to look for work in the larger cities or in neighbouring countries, most often the Ivory Coast. There they work on agricultural plantations with the aim of earning money. Either this money is sent back to the household, or kept for future needs, if not immediately spent. Migration of a more permanent form is also prevalent. Children who leave their villages in

order to work and live in the cities or in neighbouring countries continue to maintain their relations with their home villages. Important exchanges of money and food are undertaken this way.

Some ten to twenty years ago animal traction was introduced. Nowadays a large majority, 75 percent in our sample, use ploughs in their cultivation. Most of these ploughs have been bought with the aid of credits from NGOs active in the villages. This technical change has contributed to the cultivation of larger areas of land - that is, to an extensification of agriculture (Marchal, 1982, p 63-67). It is important to note, however, that the extensification of land has other roots as well. Lately, the issue of soil fertility has become increasingly important due to a combination of factors, including extensification and population pressure. The practice of fallow is rare, nowadays, and when carried out, fallow periods are short. Given these processes, most people talk about the need for using compost on their fields. However, only a smaller portion actually uses it, in our sample about 15 percent of the households.

The reason they continue to discuss the importance of compost – without using it - is because governmental extension workers try to propagate such a use in combination with techniques for optimising the use of scarce water. Such techniques include small stone-walls following the height curves of the land, or planting in holes surrounded by half-moon-shaped walls, a technique called “zai”. These water saving techniques may increase yields by 40 percent, but in a sustainable way only if more fertilizers are added (Interview, Bougma, March 2003).

What we note here is an ambiguity in the behaviour of peasants. Many are reluctant to adopt composting practices and water saving techniques proposed to them by extension workers. On the other hand, many at the same time cultivate cotton primarily as a source for obtaining chemical fertilizer. Since they do not have any other means of credit, they use part of the fertilizer provided by the cotton company on other fields. Then they rotate fields the following season in order to increase their harvests of cereals, rather than consistently increasing the harvests of cotton.

Cotton cultivation has also been strongly promoted by outside actors, the extension workers of SOFITEX. However, one difference might be that cotton cultivation in earlier periods was something that formed part of the tradition. In those days, varieties were cultivated that could be harvested over a longer period of time, compared to the variety currently used.

### **4.3 Analysis of Causes**

The information gained from the interviews with the 54 households was placed in a truth table. The exclusion of all factor combinations that did not appear in the household sample has made it possible to condense the table. 25 combinations have been retained, while 39 other logically possible combinations have been excluded. Upper-case letters mean presence of a certain variable, while lower-case letters indicate absence of this variable. The coding in the two right-hand columns

is “1” for presence of diversification of income sources, and “0” for no diversification, “+” for economic dynamism and “-“ for absence of this dynamism. The numbers before parentheses indicate the frequency of households showing a particular combination. The distribution of the households was the following:

**Table 4.6:** Causes of Income Diversification

	GANDAOGO	ZAMBANGA
w l I C s R		0/-
w l I c s R		0/+
w l i c S R		2 (0/-)
w l i c S r		0/+
w l i c s R	0/-	5 (0/-)
w L I C S R	2 (0/-)	
w L I C s R	0/+, 0/-	
w L I c s R	0/+	
w L I c S r	1/+	
w L i C S r		1/+
w L i C s R	0/-	
w L i C S R	0/-, 1/-	0/-
w L i c s R	3 (0/-)	4 (0/-)
w L i c s r	0/+, 1/-	
W l I C S r		1/+
W l i C s R		2 (0/-)
W l i c S R		0/-
W l i c s R		0/-
W L I C S R	2 (0/+)	
W L I C s R	3 (0/-)	
W L I c S R	2 (0/-), 0/+	
W L i C S R		2 (0/-)
W L i c S R	0/-	
W L i c S r		1/-
W L i c s R	3 (0/-)	3 (0/-)

Source: Fieldwork.

The table may be further condensed by using the Boolean concept of “prime implicants”. More general expressions imply a number of more specific expressions. These more specific expressions may be subsumed under certain conditions. Those expressions that differ only in one variable may be treated as not containing this variable as long as these two different expressions produce the same result. In those cases it may be logically concluded that it is the other variables in the combination that produce the specific result. We may exemplify with the two expressions w l i c S R and w l i c s R which may be reduced to w l i c R, since it does not matter whether there is an s or an S. An analysis of the present truth table, however, indicates that there are no further possible reductions of the expressions that result in income diversification. If expressions not resulting in

diversification are analysed, it is possible to make reductions, however not very many. The analysis may be undertaken of the table as it stands as well.

By counting the presence of the different variables on both the resulting and the non-resulting end of the spectrum, it appears that there is only one variable that seems to be systematically related to the diversification behaviour. That is the factor R, reluctance to change. Diversification occurs when this factor is low or absent; when it is present, no diversification is taking place. Since we have already noted that no further prime implicants could be found, we may also draw the conclusion that no other combination of these variables exist that is systematically related to the practice of income diversification.

By observing which variables result in diversification, it turns out that the factor L, land availability, is also equally present. But when we turn to the non-diversification side, we find no such relationship. Here the major difference as compared with the reluctance to change variable becomes evident. Starting from the non-diversification end, we note a tendency for inputs not to be available to those not diversifying. However, there is no relationship whatsoever between inputs availability and the actual practice of diversification.

Could it be then, that it is a combination of low reluctance to change and the availability of sufficient lands that is needed in order to create diversification? This is not probable, since such a combination is present only in four of the six diversification cases, i.e. less prevalent than either of the two variables in isolation. This picture becomes even clearer when studying the non-diversification cases.

The conclusion that appears is that a low reluctance to change is at least a necessary condition for the diversification of income sources to occur. However, one case exists where a reluctance to change is combined with diversification, and no less than three cases exist where a low reluctance to change does not lead to an income diversification. How could this be the case?

A closer look at those cases indicates that the diversifying household that has a high reluctance to change is the household of a blacksmith. Being a blacksmith is in itself a culturally impregnated activity, which means that blacksmiths are people that stick with the traditional way of behaviour. However, according to our definition, at the same time it does mean that diversification takes place since the blacksmith gets more than 20 percent of his income from another activity than agriculture and livestock. One might thus say that we are suffering from a definition that not does fully capture what we would like to capture.

But there are as well no less than three cases where a low reluctance to change does not lead to diversification. One of these concerns the case of a household headed by a young Peuhl. The ambition of this man is to go into commerce, but he has so far not been able to. It is however likely that he will diversify his activities in that direction in the near future. The other two cases concern a highly active member and a chairperson of peasant groups. One possible explanation might be that these households have been wrongly classified regarding their reluctance to change. Given that they are involved in organised activities it might be that outside actors, in these cases development NGOs, are leading them to undertake change. However, this is not a very convincing argument, since they have chosen by

themselves to become members, and in one case even became chairperson, of the association. We need a better explanation of these cases.

Given that we have concluded that the low reluctance to change is a necessary condition for the diversification of income sources, we need to control for the possibility that any combination of other factors is a necessary complement. May it be that low reluctance to change leads to diversification when it is combined with not one, but two or more of the production related variables? On closer examination, we see that in all the three cases where a low reluctance to change did not lead to diversification, only one of the productive factors is present. Furthermore, in all the other cases where diversification actually occurs, at least two of the factors are present. This thesis thus finds support.

There remains however one case where diversification takes place, in spite of the fact that only one of the productive factors is present. This exception concerns a carpenter who has decided to return to farming, because of the death of his older brothers, who used to farm. He suffers from a lack of resources, but may nevertheless be said to be diversifying in the sense that he is combining his former profession with agriculture, rather than combining agriculture with other activities. He could be said to enter diversification from another “direction” than all the others, as he is going “back” into agriculture, whereas others are diversifying “out” of traditional forms of agriculture.

Thus, we conclude that a low reluctance to change may lead to income diversification given that it is combined with the presence of two or more of essential productive assets. Low reluctance to change is a necessary but not sufficient condition. It is the combination of a low reluctance to change and at least two productive factors that is needed. This means that, under such conditions, a certain build-up period is necessary in order for diversification to materialise. Entry barriers of some kind are thus involved, even if the major hindrance to diversification is to be found in the reluctance to change.

Since we have treated the two villages separately, we may note that they are similar on many counts. The level of trust is similarly low, only a little more than one third expresses a high level of trust in both villages. The availability of labour force, the level of reluctance to change and the prevalence of diversification are also equal. But whereas no household in Gandaogo lacks land, a majority of households in Zambanga expresses such a lack. In Zambanga there is also almost a total lack of externally obtained inputs and a very low availability of credits. This has to do with the climatic differences, since inputs and credits arrive in Gandaogo through the cultivation of cotton, and the agreements with SOFITEX. Cotton cannot be cultivated in the drier Zambanga.

Interesting to note, thus, is that the introduction of cotton cultivation has not led to any further diversification of economic activities in Gandaogo, so far. Cotton cultivation as such has not been defined as diversification (according to the 20 percent-of-total-income-criterion), since it forms part of traditional cultivation practices in the village. Furthermore, no spin-off effects from cotton cultivation have appeared, at least not some five years after the introduction of cotton on a large scale. It seems as if reluctance to change is a factor that takes time to alter.

The basis for this reluctance is to be found in cultural patterns, norms and even in aspects of identity. Hence it seems as if a five-year period is far too short for seeing any results - if the introduction of cotton and the increased market orientation that it implies have any effects of that kind whatsoever.

We have noted that the climatic factor makes a clear difference by making other kinds of cultivations possible. The introduction of cotton is the prime example, but other examples can be found, such as the prevalence of corn cultivation.

#### *4.3.1 Comparing with Other Cases*

In order to check the validity of the results found in two villages on the Mossi Plateau, a control with other villages will be made. In this way the argument about the isolation of other possible explaining factors may be taken further. We chose to study the Mossi Plateau because aggregate statistics had shown a lower level of income diversification there, as compared to regions in the north as well as in the south-west of Burkina Faso. Further, these statistics indicate that income diversification is particularly higher in the province Yatenga in the northern parts of the country. Since the dominating ethnicity even in this province is the Mossi, and the province is situated on the north-west corner of the central plateau, the study of villages there would give us a possibility to check for the influence of agro-economic conditions, and possibly also other, hitherto unknown, independent variables that may explain differences in income diversification patterns. The villages of Bango and Rapougouna in the province of Yatenga in the northern region of Burkina Faso were selected. These villages show similarities with Gandaogo and Zambanga in terms of market access, size and social structure.

In order to compare with the situation in the south, one village in northern Ghana, Zaare, was studied. The people living in this village do not belong to the Mossi ethnicity. However, the Mossis are held to have their historical roots in this part of Ghana, so there are possibilities of some cultural similarities, but apart from that the cultures differ. Another thing that differs in Ghana is the macro-economic setting. Ghana has for instance a free-floating currency. The area studied in Ghana has a very different level of literacy as well, due to another colonial history and the availability of free and widespread basic education.

However, part from these differences there are many similarities between the Mossi Plateau and northern Ghana. Agro-ecological conditions are fairly similar, population density, influence of traditional structures of authority and farming systems are also similar. In fact, the similarities outnumber the differences and the choice of method for comparison of cases may be phrased in terms of "most similar method". Such a method has its strength in singling out those factors that really differ. If a variation is noted in the dependent variable, we would have a strong argument for claiming that the differing factors are influential. If on the other hand no variation is noted in the dependent variable, these factors may be excluded from the explanation.

The first thing noted, when turning to the comparative material from Zaare in northern Ghana and the two villages of Bango and Rapougouna in Yatenga, northern Burkina Faso, is that the incidence of income diversification is much higher in both

these areas. This seems to be consistent with the aggregated statistics for Burkina Faso that have already been analysed. We may observe the pattern in the following truth table. Cases of income diversification are also here marked with “1”, and absence of diversification with “0”. Economically dynamic households are represented by “+”, whereas “-“ represents lack of dynamism. Where there is more than one case that obtains the same value, this is marked in a parenthesis times the number of cases. The table indicates that the level of income diversification is 75 percent in Rapougouna, whereas it does not even reach eight percent in Bango. In Zaare, Ghana, two-thirds of the cases in the sample are diversifying.

**Table 4.7:** Causes of Diversification Outside The Mossi Plateau

	Zaare (Ghana)	Bango	Rapougouna
wlICSR	1/-		
wlICsr	1/+		
wlIcSR	(1/-) x 3	0/-	
wlIcsR	0/-		
wliCSR	1/-		
wliCSr	1/-		
wlicSR	1/-		
wlicsR	1/-, 0/-	(0/-) x 3	
wlicSr			(1/-) x 3
wLIcsr			1/-
wLIcSR		(0/-) x 2	
wLICsR	1/-		
wLIcsR		0/-	0/-
wLicSR	0/-	(0/-) x 3	(0/-) x 2
wLicsR	(0/-) x 2	(0/-) x 10	
wLicSr			1/+, (1/-) x 2, 0/-
WlIcSr			(1/-) x 2
WlIcSR	1/-		
WlIcsR	1/-		
WlIcsr	1/+		
WlicSR	0/-		
WlicsR	0/-, (1/-) x 3		0/-
Wlicsr	1/+		
WlicSr			1/-
WLICsr		1/+	
WLIcsr		1/+	
WLIcSr	(1/+) x 2		(1/-) x 2
WLIcSR	(1/-) x 2		
WLiCsR		0/-	
WLicSR	0/-	0/+	
WLicsR	1/-	(0/-) x 2	
WLicsr			(1/-) x 3

While there seems to be consistency between this sample and aggregate statistics as presented by the ISDN surveys discussed earlier, there is, however, one exception to the pattern of higher diversification in Yatenga and in Ghana. In the village of Bango in Yatenga, the level of income diversification is lower than in Gandaogo or Zambanga on the Mossi Plateau in the central parts of Burkina Faso. Furthermore, when the diversification level in Bango is compared to the level in the neighbouring village of Rapougouna, a striking difference appears. These two villages are only some 15 kilometres apart, yet they mark the two extremes in the whole sample. While analysing the factors investigated, we find in these two villages differences in three of them: land availability, social capital and reluctance to change. While differences in land availability are only marginal, differences in social capital and reluctance to change are of major importance when comparing these two villages. Hence, the conclusion is that explanations for differences in income diversification between these two villages need to be sought in these latter factors. I will, therefore, dwell somewhat on the related dynamics.

#### 4.3.1.1 The Yatenga Villages

Focus group interviews, and interviews with key informants in the two villages, show that levels of awareness concerning environmental and societal challenges vary greatly between these two villages. Throughout the years a number of different NGOs have been active in the area, including in these two villages. But while Bango has been exposed to a tradition of free handouts, interventions in Rapougouna have been characterised by awareness-raising and education. In almost every interview in the two villages, a difference in the way people answered questions became visible. The willingness to do things without financial support from outside is much larger in Rapougouna. In Bango, even one of the richest inhabitants in the village could not refrain from complaining about the lack of financial resources while being visited by a foreigner. Also the willingness to listen to, and take advice from, government extension workers or other outside advisors is markedly greater in Rapougouna as compared to Bango.

In addition the number of active organisations is higher in Rapougouna than in Bango, and their membership more widespread. This indicates that the character of social capital prevalent in Rapougouna consist of both the integration and the linkage components (Woolcock, 1998), while the social capital in Bango is characterised by integration only. This is also evident from the level of conflict in the village. Albeit not visible to every outsider, the tension between Mossi and Peuhl regarding access to land around a dam built some 15 years ago is significant. Around this dam, vegetables are grown in the dry season, and the Peuhl are having great difficulties in getting access to this economic activity. Social gaps between these different ethnic groups are pronounced in Bango, whereas they are much less visible in Rapougouna.

Furthermore, the interviews indicate that household heads on average are older in Bango than in Rapougouna. Might it be that the more prevalent reluctance to change observed in Rapougouna is caused by age difference? It emerges from the field studies that those household heads that have a high reluctance to change are on average 60 years old in both villages, whereas those with a low reluctance to



change are on average 28 years in Bango and 50 years in Rapougouna respectively. It may be concluded that there is a difference between generations in Bango, because of these averages, and because of the fact that a low reluctance to change appears only among the youngest heads of households. However, in Rapougouna a low reluctance to change dominates among the oldest people - as well as among the youngest. It is therefore not self-evident to speak about a difference between generations in this latter village. Age is clearly much less influential in Rapougouna.

As emerges from this discussion, there are a number of factors that possibly are influencing the differences between these two villages regarding diversification of income sources. But, by analysing the truth table emerging from the sample more closely, it is possible to isolate one of the factors as the one driving income diversification in Bango and Rapougouna: the low reluctance to change. In all cases, with one exception where there is a low reluctance to change, diversification is occurring. In all cases where there is a high reluctance to change, no diversification is occurring. It appears that in these two villages, low reluctance to change is both a necessary and a sufficient condition for income diversification.

As seen above, age and generational tensions may represent differences in the reluctance to change in Bango, but not at all to the same extent in Rapougouna. In the latter village some other influence is dominating, something else has caused the divergent attitudes that may be observed.

The other factor emerging from the discussion above - social capital - is not able to explain why income diversification occurs. Social capital is more prevalent in Rapougouna than in Bango. In the former village it appears as well in the two complementary forms that are needed for it to be benevolent to development (Woolcock, 1998). However, as we see from the truth table, diversification occurs both with and without the presence of social capital. Hence, this difference between the villages is not related to the difference in income diversification.

The fact that the same causal factor is found in Bango and Rapougouna as in Gandaogo and Zambanga implies in principle that those factors that differ between these villages may be excluded as causal factors. But since the major difference is the level of rain and other agro-climatic conditions, a somewhat complicated picture emerges. On the household level, the explaining factor is clearly the low reluctance to change. But since we saw a clearly higher level of income diversification in Rapougouna, as compared with Zambanga and Gandaogo, agro-climatic differences may not be excluded on the provincial level. The differences in level of income diversification between Bango and Rapougouna have already been referred to as stemming from different attitudes towards taking initiatives, and to different levels of social capital. But, could this still be dependent on harsher agro-climatic conditions? The INSD statistics indicate that Rapougouna is more representative of the Yatenga province than Bango. And if a majority of villages in Yatenga have a high level of social capital, and also generally low levels of reluctance to change, this might have something to do with the harsher agro-climatic conditions, than those found on the central parts of the Mossi Plateau.

However, aggregate statistics from other provinces in the northern region indicate lower levels of income diversification, as compared with Yatenga. Therefore, it is more plausible that a higher level of social capital (both linkage and integration) is the result of conscious interventions by NGOs and other outside actors, rather than a direct effect of harsher agro-ecological conditions. However, a combination of these two factors is the most probable explanation to the higher level of diversification in the Yatenga province.

#### 4.3.1.2 The Case from Ghana

In Zaare, northern Ghana, things are different. Here, the thesis that income diversification is driven by the low reluctance to change does not hold. A different pattern is prevalent. But, on the other hand, no other factor in the truth table is able to explain the prevalence of income diversification. Is income diversification in Ghana so different from income diversification in Burkina Faso that no relevant pattern can be found? Neither any single factor, nor any combination of factors in the table may explain income diversification in Zaare. However, a closer look at the other dependent variable, economic dynamism, indicates that there is still a relationship to be found. In every case where economic dynamism is found, there is a low reluctance to change. In almost every case where there is no economic dynamism, we find a high reluctance to change. The only exception is the household of a blacksmith. This household has a low reluctance to change, but lacks both land and labour and cannot afford farming inputs like fertilizer. Hence, it is probable that the lack of these other factors keeps the household from developing a larger economic dynamism.

When analysing factors causing economic dynamism, the issue of age and generational differences may be at play, as well. There is no significant difference in age between those villagers who are diversifying their sources of income, and those who are not. Both groups are on average slightly below 50 years. But the group showing economic dynamism is significantly younger than all the others, with an average of slightly above 25 years. Hence, age, and with that openness to impressions from outside, plays an important role.

In Burkina Faso the same relationship is found in all the villages studied. A low reluctance to change is a necessary, and in some cases also sufficient, condition for income diversification. This would then mean that people are not used to diversification, it is not a normal approach for them to take. Their identity is rather to stay more strictly with agriculture and cattle breeding. But in settings where people show a low reluctance to change it follows that the level of income diversification becomes higher.

However, in Zaare, Ghana, income diversification is not related to a low reluctance to change. Might it be that this diversification behaviour is more thoroughly rooted in people's identities? Clearly, Zaare is a village with a long tradition of basket weaving and trade. It is situated close to the town of Bolgatanga, which is known as a trading place for basket work in particular. Zaare is deeply involved in this activity as almost all its inhabitants produce baskets, which are sold either to traders or directly at the Bolgatanga market. Since basket weaving adds one more economic activity to what peasants ordinarily do, the immediate effect is that they

must be characterised as undertaking income diversification, according to our operationalisation of that concept. Basket weaving, pot making and labour migration are the heavily dominating side activities to agriculture in Zaare. The very identity of a Zaare peasant is to be a cultivator and basket weaver at the same time. This interpretation is reinforced while visiting other villages in the Upper North region of Ghana. In these other villages, no such specialisation as the one found in Zaare exists, and the behavioural pattern of peasants is more similar to the one found in Burkina Faso.

The relationship between a low reluctance to change and an economic dynamism, found in Zaare, actually points in the same direction. It takes younger people with new ideas and more open minds to develop those activities that prove to be more profitable and progressive. When studying those examples more closely, one finds that there is a relationship between the way these households deal with their diversification and their economic dynamism. A household led by a 25-year old man, may serve as an example. While most households in the village use the incomes from their basket weaving for “solving problems“, that is, more immediate consumption, this particular household has a clear strategy for investing in measures that may increase farm production.

While a very large majority of the inhabitants in Zaare are asking and searching for larger areas of land to cultivate, this household has settled for the 1 hectare it controls. “Since our means are limited, it is better we intensify the cultivation on the land that we’ve got“, the household head claims. “Our tradition tells us to expand into new lands, we’d always like to try new grounds. Even I have been offered more lands, but according to the way I think it would be a waste of efforts to take on more than I already have got.“ This household is instead using its incomes from basket weaving and the sale of vegetables for buying fertilizers, for investments in irrigation and for the rent of land for dry season vegetable cultivation.

Only a tiny minority in Zaare uses income diversification in this way, as a strategy for actively developing cultivation. It is this minority that may show the economic dynamism that has appeared in the sample. Thus, in this sense, a pattern is found which is similar to the pattern also found in Burkina Faso: it takes low reluctance to change in order to use diversification of income sources as a strategy for accumulation in Zaare. Diversification used as a strategy for risk minimisation is widely practised; it seems to have become institutionalised in this village. Hence, two different strategies of diversification co-exist in Zaare. A small minority uses diversification for the sake of accumulation. A vast majority uses it as a risk reducing strategy.

The factors that separate the situation in Zaare from the villages on the Mossi Plateau in Burkina Faso are the character of the chief system, ethnicity, the level of education and the macro economic setting. The chief system would, if influential, have resulted in lower levels of diversification in Zaare since the colonial legacy is more pronounced there as compared to Burkina Faso. Hence, it may be disregarded as a factor causing differences between the two countries.

The most important part of the macro economic setting would arguably be the floating currency, which affects the price level for tradeables, such as agricultural products or handicraft. Since there are three important factors that differ, it is impossible to draw any firm conclusions about which one of them causes the difference noted. But it is still possible to come a bit further by using the material gathered during fieldwork. To start with the macro economic setting, it could be noted that the character of the diversification noted in Zaare is very uniform – “everyone” is involved in the weaving of baskets. If the currency rate had been the decisive factor, it would have been possible to diversify into a number of different activities, which is not the case. Prices would have been more beneficial in other tradeables too, such as agricultural by-products and other handicrafts.

The same line of argument is actually also valid for the other two factors: had the higher level of education or the ethnicity factor been decisive, a number of different economic activities would probably have been undertaken. By reviewing the material while disregarding basket weaving, it appears that the same kind of pattern as found in the Burkina villages emerges. Income diversification is no longer as common, and it is driven by a low reluctance to change, as seen in the following truth table.

**Table 4.8:** Zaare Households Analysed with Basket Weaving Disregarded

wIICSR	0/-
wIICsr	1/+
wlicSr	2 (1/-)
wlicSR	1/-
wlicsR	0/-
wlicsR	6 (0/-)
wLICsr	1/-
wLicSR	0/-
wLicSR	0/-
wLicSR	0/-
WLicsR	2 (0/-)
WLicsR	0/+, 0/-, 1/-
WLicSr	2 (1/+)
WLicSR	0/-
WLicSR	0/-
WLicSr	0/-
WLicsR	0/-
WlicSr	1/-, 1/+
WIICSR	0/-

An analysis of this table indicates that no other variable, or combination of variables, shows any correlation with income diversification. When it comes to reluctance to change, however, there are only two cases which do not fit the pattern: one case where high reluctance to change leads to income diversification, and one case where a low reluctance to change does not lead to diversification. All other cases follow the pattern also found in Burkina Faso. The case where a high reluctance to change is combined with diversification is the case of a blacksmith,

paralleling the case from Gandaogo that was discussed above. The case where no diversification is taking place in spite of the low reluctance to change is more difficult to analyse, but it might be that this household is lacking resources to enter into other activities, since it is a very poor household, with many constraints.

Now, the argument that Zaare shows a similar pattern to the Burkinabé villages is of course hypothetical, since basket weaving and thus income diversification are realities in Zaare. But what it leads to is a conclusion that income diversification is undertaken when the particular activity in question forms part of the tradition, and when there are opportunities in the forms of available markets and resources for this activity. The differences between Zaare and the Burkina villages are not that great. There is an underlying pattern driving income diversification in Zaare too, but the availability of one particular activity has changed the whole picture. The character of this activity, basket weaving, makes it seem probable that it is the availability of the knowledge of how to make baskets that makes the picture change. Material for making baskets may be found in other places, so that is less plausible as a limiting factor. Furthermore, had it been the higher educational level that differed between Zaare and the Burkinabé villages, this would have been observable in attitudes, i.e. the reluctance to change would generally have been lower in Zaare, which it is not. That leaves differing market conditions and/or the existence of the know-how in basket weaving as factors that may explain the difference that has been observed.

#### **4.4 Conclusion**

In the central part of the Mossi Plateau in Burkina Faso, the level of income diversification is lower than in other regions of the country because income diversification is driven by the level of reluctance to change found at household level. The reason accordingly why this reluctance to change is high in Mossi-dominated areas, might be sought in the fact that institutions guide peasant behaviour. One key informant, who has worked with peasant organisations and issues of peasant cultivation for more than 30 years has over the years been asking himself one question about Mossi farming systems: Why do not all the migrant workers that travel every year to Ivory Coast, Ghana or other countries bring home with them new cultivation methods? They clearly have the knowledge, but change is nevertheless not taking place. For instance, hardly any introduction of sharecropping systems is taking place, rotation of crops is very rare, very minor efforts are made in order to improve soil fertility etc. (Interview, Paré, E. 2001). The reason he finds is that traditional roles and hierarchies are maintained. And because these roles and hierarchies would be threatened by changing farming practices, such changes are rare. However, as the findings from Yatenga shows, such practices may be changed under the pressure of harsh agro-ecologic conditions and interventions aimed at changing attitudes.

In the four Burkinabé villages studied, the level of reluctance to change may explain income diversification. Diversification is in all these places a strategy used in order to decrease risks ex-ante or ex-post. It is a more prevalent strategy in places where this reluctance to change has been pushed to a lower level, either

because of outside pressure of e.g. climatic factors, and/or by awareness-raising interventions by outside development actors. It is higher where internal power structures, path dependency and sunk costs uphold institutions that promote continuity and hence hinder change.

In Zaare, Ghana, diversification as it stands is not driven by the level of reluctance to change. There, diversification is an integrated part of the behavioural pattern amongst peasants. To be a peasant in Zaare implies diversifying into basket weaving, partly because of tradition, partly because the market opportunities are there. However, there is an underlying pattern where a low reluctance to change explains the existence of those forms of income diversification that do not include basket weaving.

An argument about the isolation of one factor explaining income diversification has now been developed, as well as an argument about the counterfactual situation where this explaining factor is not present. The presence of a low reluctance to change is found to explain the practice of income diversification in four Burkinabé villages, and indirectly also in one village in northern Ghana. The argument has been built by surveying approximately 30 households in each of these villages – enough of a sample to present a picture that is representative of each of these villages. The argument also links up with previous studies of income diversification in Burkina Faso, and with current statistics about the prevalence of diversification. As well the differences observed between these different villages make the argument stronger. By finding the same explaining factor in different environments it has been possible to exclude more alternative independent variables. But this is not to say that the explanation is complete yet. In order to be a more convincing explanation we need arguments about time asymmetry and causal mechanisms, as well. To that we turn in the next chapter.

## 5. Tracing Underlying Mechanisms

### 5.1 Mossi Attitudes Towards Cultivation Patterns

Having developed arguments about the isolation of other factors, the discussion will now proceed with a search for mechanisms on a more disaggregated level that may help explain why the low reluctance to change is causing income diversification. This part may also be called process tracing and it will use the more qualitative information that was gathered through the case study method. Even this argument will consist of several different steps.

From the semi-structured interviews undertaken in Gandaogo and Zambanga as well as in Bango and Rapougouna it became apparent that traditional values play an important role in the economic behaviour of Mossi peasants. Some examples of this may be mentioned:

- a) The reluctance to sell certain species of cereals even if a surplus remains from earlier cultivation seasons. The harvest is rather stockpiled for several years. This behaviour is related to norms about the use of food crops, and to norms about obligations to help other members of society.
- b) The system of distributing valuable lands for the cultivation of vegetables. A norm saying that land should be distributed to persons in need of land results in a practice where changes which would possibly result in increases in productivity are not undertaken.
- c) The continued use of gifts as a means to uphold relationships even when alternative investment opportunities, which at least seemingly would produce higher returns, are available.

In order to be able to analyse these patterns of behaviour a survey of attitudes was conducted in four other villages. This survey was undertaken to find a first part of the argument about mechanisms underlying the low reluctance to change. The villages included in the survey were not the villages where the semi-structured interviews had been undertaken. In each of the four villages, 25 persons were asked to express their opinion on several statements that were made regarding peasant behaviour in key areas. The respondents were asked to place themselves on a five-grade scale, where 1 expressed full agreement and 5 expressed total disagreement with the statement made.

The respondents were not selected by random sampling, since such a process would have taken enormous resources in terms of time and travelling in order for the sample to represent the totality of the Mossi Plateau. A different approach was chosen, where all the villages in one of the provinces on the plateau were mapped and classified. The province, Ganzourgou, was chosen because it is situated in the central area of the plateau, and because it is a medium region as regards a number of aspects in agricultural production and demography. The central location means that the agro-ecological conditions are average for the whole plateau. The medium place in agricultural production means that socio-economical structures may be assumed to be medium for the plateau. The aspects chosen for this selection were the shares of the population undertaking certain economic activities as their

primary activity, production of sorghum and millet, household size and age structure of the population. Taken as a total, Ganzourgou was found to be a medium province regarding these aspects. Statistics used as a basis for the selection of villages were taken from INSD (2000a, 2001). Persons with very good knowledge about the villages did the mapping and the principle used for the classification was the level of retaining traditional lifestyles. Villages were put in three different classes: traditional villages, ordinary villages and modernised villages. The number of inhabitants in each category of villages was calculated with the support of population statistics (INSD, 2000a). In this way the shares of people living in each of the categories of villages were obtained. It turned out that about one quarter live in more traditional villages, one fourth live in what were called modernised villages and about half of the population live in the medium category.

The four villages were thus chosen so that one of them (Ziga) represents the more traditional way of life, one represents the more modernised or most externally influenced lifestyle (Tanlarghin), and two villages (Pousghin and Sanaa) represent the medium category. Given these shares, the survey may be treated as representing the whole population on the Mossi Plateau.

One of the statements put forward to the respondents was taken from a study that was conducted ten years ago. In 1991, Pierre-Joseph Laurent interviewed 288 persons in six villages. One of the statements included in that survey concerned people's view on what a person returning from the Ivory Coast should do with the money he had earned (Laurent, 1998, p 234). At that time 68.2 per cent of the respondents agreed that such a person should generously share his money with relatives and others, otherwise he would be regarded as worthy of disdain.

The result of this study, ten years later, shows that roughly 80 per cent of the respondents agree with this statement - 63 per cent agree fully and 18 per cent partly. The result is the same regardless of which village the respondents live in. Hence, regarding such an issue no noteworthy change in opinion has taken place. If there has been any change it is rather a higher portion that agrees with what tradition and norms would prescribe today, as compared with ten years ago.

A question along the same lines was also included in the survey: "Should money that is left when all those expenses that are necessary for the household are made, be spent on fertilizers in order to increase next year's harvest, or on gifts in order to uphold social relations?" The reactions to this indicate that 50 per cent of the respondents think that money should be split equally between the two uses, whereas 41 per cent thought that three fourths of the money should be spent on fertilizers and one fourth on gifts. There is always a tendency to place oneself in the middle of the alternatives presented, when statements are formulated this way. But it is nevertheless noteworthy that only 3 per cent of the respondents thought that no money at all should be allocated to gifts. 6 per cent thought that more money should be spent on gifts, than on fertilizer.

These reactions to statements made show that relations continuously play an important role in the Mossi peasant economy. It is also clear that attitudes on these aspects have remained more or less the same over the last ten years; in spite of the



fundamental economic reforms the agricultural sector has been going through, and in spite of the continuous commercialisation of the society that is ongoing.

Another attitude that remains strong among Mossi peasants is the view that certain crops should be sold only if great problems emerge, that is, if no other source of money to solve these problems may be found. It is seen both as a sign of affluence and more importantly as a security strategy to remain with a stock of sorghum and/or millet. The opinion expressed is that if you sell your stock of these crops, and later happen to find yourself in trouble, no one will be prepared to help you, since the selling strategy is seen as highly unwise. Over 80 per cent of the respondents disagree with the claim that millet and sorghum should be sold if a surplus remains more than one year after the harvest.

If the statement is formulated otherwise, in order to take an increase in crop prices into consideration, or if the objective of selling the harvest is to gain money to buy a plough, the opinion is however changed. If a surplus remains more than one year later, and if an increase in millet or sorghum prices occurs, the share that refuses to sell decreases to 60 per cent. If the objective is to sell some of the surplus that remain in order to buy a plough the share that remains opposed to the sale decreases further to 49 per cent.

But seen from a different angle, one may note that even when the objective is to increase agricultural production, through the acquisition of a plough, half of the respondents do still remain opposed to a sale of sorghum or millet surpluses! One has also to note that these surpluses are not immediately needed for feeding the family, since they remain from the previous year's harvest. This norm of keeping a stock for security reasons does therefore keep its hold on Mossi peasants.

Another area where norms of behaviour appear to be influential is the choice of varieties to cultivate. Even in such a relatively new activity as vegetable gardening, which has developed strongly the last ten to fifteen years, strong habits of using special varieties have already developed. According to salesmen of vegetable seeds, these habits are deeply rooted. In some places a large majority of the cultivators grow onions. In other places it is tomatoes that prevail. Areas with a more diversified cultivation are rare, and are typically found closer to urban areas. Changes of varieties take place only when severe problems arise (Interview Ouédraogo, april 2001). Interviews do also indicate that a majority of peasants stay with the same varieties that have been cultivated by their parents.

When asked to react to a statement about what a peasant ought to do when being told about a new variety with higher yield, a majority (53 per cent) think that it would be preferable to try the new variety on a small plot, but not on a large scale. 38 per cent of the respondents are however against the idea of trying the new variety. Here a difference in the responses may – for the first time – be noted between the village that has been more exposed to outside influence on the one hand and the more traditionally oriented villages on the other hand. In the more traditionally oriented villages the use of plant varieties is more guided by habits as compared with the village where the external exposure is larger.

A further interesting area is the issue of land distribution. In the Mossi culture, conflicts over land ought to be avoided by every means possible. The way man

relates to land is an issue that should be developed much further, but suffice it to say that those who like to work the land should not be refused access to land, according to prevailing norms. These norms are especially strong when family relations are involved. If someone proves that he or she is related to a special village, he or she should not be refused access to land there.

Even if “strangers“, that is people not related to the village, come to ask for land, they should be given access, if a possibility exists. That such a norm exists is clearly seen in villages where dams have been constructed and opportunities for vegetable gardening during the dry season arise. The availability of water during the dry season greatly increases the value of the land surrounding the dam. But traditional patterns of land distribution are still upheld, and investment opportunities for individuals are thereby foregone.

Occasionally it happens that individuals try to accumulate land in order to expand their cultivation, but this is a rare phenomenon. The most prevalent pattern is that land is borrowed, and that a gift of some sort is offered to the person holding the right to the land. There is, however, no such thing as a fixed level of the size of the gift. The gift is something that serves to uphold social relations, and it might even be abandoned if the cultivator lacks the means for giving a gift. When asked about the possibility of renting land, a large group of respondents in the survey disagrees. The land should rather be lent out free, according to 43 per cent. A majority would however agree to a fee in the vicinity of 5000 francs CFA (about 7 US dollars) to be paid for the use of the land.

Those who most often are in need of new land to cultivate are young people setting up their households, and “strangers“ migrating in search of land. The normal principle applied is that these strangers and young couples may negotiate with those who control the land. The lands under negotiation are usually not the best parts, and the conditions for use of these lands are furthermore not very stable. If someone lending these marginal lands really manages to increase the fertility of the soil and get good harvests, they run the obvious risk of losing access to them. The person with the original right to the land may very well reclaim it. When asked about whether they think that a young couple borrowing lands from someone else would be able to produce higher yields on land that they fully control, not less than 66 per cent agreed fully or partly. 31 per cent disagreed with this.

To sum up, the results of this survey imply that customary norms and issues related to upholding relations are still very influential on the Mossi Plateau. Furthermore, these norms to a great extent influence decision-making concerning economic matters. Such decisions are seldom taken only on the basis of rational calculations about the marginal utility of production factors. The logic applied is rather one where the respect for prevailing norms is an overriding objective. This is obvious for example when the choice of crop varieties or the issue of land distribution comes into focus. These issues will be dwelled on later. However, the first part of the argument about mechanisms underlying the low reluctance to change leading to income diversification is that customary norms and the upholding of relations are still very strong factors on the Mossi Plateau, and that these things also have a great influence over decisions related to economic life.

## 5.2 Further Discussion on Diversification

The behaviour of peasants on the Mossi Plateau has so far been characterised as showing a limited form of income diversification. It has been established as well that a reluctance to change is the major hindrance towards income diversification. The existence of norms that guide the economic behaviour of peasants has been discussed, and a behavioural pattern at the individual level has been described. This reinforces the argument that the reluctance to change is a central explaining factor of income diversification, and that this reluctance to change is to be sought as part of a cultural identity.

This argument may, however, be taken further. In the Mossi tradition, belonging to certain professions is an area filled with taboos and norms. Certain tasks are exclusively assigned to certain families or villages, such as forgery, weaving, dyeing of textiles, pottery or traditional hat making. No other people than those belonging to these special families, or ethnic, groups are allowed to enter into these activities.

The blacksmiths, to start with, have in the Mossi society constituted somewhat of their own caste. They are marginalised, but at the same time they are feared because of their supernatural powers. There are strict taboos against marriage between blacksmiths and others, and the profession in its traditional form is inherited from father to son. If this is the case the boy has to be introduced into the profession from the age of five or six. Another possible way of becoming a blacksmith is if one happens to be seen doing the work of a blacksmith. That would mean exclusion from one's own lineage, and being faced with the only option of creating a new family unit of blacksmiths (Savonnet-Guyot, 1986, p 105, Lédéa Ouédraogo, 1990, p 54ff, Interview, Youdou, Mathieu, February 23rd, 2001).

The blacksmiths are seen to have special powers. When someone has problems in having children s/he may turn to a blacksmith. He could also be of help when it comes to calling on rains or regulating crimes. Blacksmiths are seen to have a special relationship with the sacred lands, through their ability to control fire, but also through their habits of burying some of their equipment in the ground for ritual reasons. When a new blacksmith's workshop is installed, a number of animal sacrifices are made in order to make that workshop powerful. Other people are not allowed to touch the equipment of a blacksmith, and are supposed to leave their shoes outside when entering a blacksmith's workshop. To enter the workshop is only possible in the presence of the blacksmith himself.

When someone dies it is normally the task of the blacksmiths to bury the body, because of the blacksmiths' special connections to the land and the powers residing in the land. When a blacksmith himself dies, the body is carried to the workshop where a heated iron is used in order to make a scar on the dead body (Pooda, 1992).

The reason why so many and such strong taboos are ascribed to blacksmiths and to their activities is probably that blacksmiths hold very central positions in the Mossi society. This people of warriors has been highly dependent on the manufacture of arms, and this people of peasants has also been and highly dependent on the

manufacture of agricultural tools. In both these aspects, the blacksmith is the central person.

In a similar manner, the textile dyers traditionally belong to the Marâse ethnical group, whereas the weavers belong to the Yarse. These groups also involve themselves in different forms of commerce often related to cotton handicrafts. Both these groups are Muslim, and therefore open to those who would like to convert to Islam. The professions have for a long time, however, been kept within these ethnic groups through taboos. The pit where the actual dyeing is done is for example surrounded by prohibitions for those not involved, and beliefs about dangers hurting trespassers (Savonnet-Guyot, 1986, p 105f). Fines are also asked from trespassers. The fines are often paid in the form of animals, which are later used for a party where all the producers participate (Pooda, 1992).

Two groups of pottery makers exist - those specialising in making crocks, and those specialising in making earthenware. For the making of crocks a special kind of clay is needed. Furthermore, strong beliefs exist that dangers will face those persons that use this clay without prior authorisation. It is not even possible for one of the two groups of pottery makers to shift into the other kind of pottery. The only way of starting with pottery is to ask permission to become a member of one of these societal groups. Those involved in pottery are also seen as having considerable powers that emerge from the earth. Those not engaged are supposed not to get too close to the pottery activities.

Before the production starts, ritual sacrifices are made. If the earth does not accept the offers made, the pottery production will not succeed and it is better to undertake some other activity during the dry season of that year. If one proceeds anyhow, the result will, according to the traditional belief, be that the market for pots disappears and poverty will hit the pot maker. Whether a sacrifice has been accepted or not may be seen through the way the bodies of the sacrificed animals fall on the ground after being killed (Interview, Mathieu, February 23rd, 2001).

The taboos related to these and other professions form part of the Mossi history. With modernisation, many of the taboos have, at least in a superficial way, been considerably weakened. Modern blacksmiths today exist side by side with traditional ones. Blacksmiths have started to cultivate the land, which they did not do earlier. Through increasing influences from outside, taboos are applied less strictly. But this does not mean that the taboos are fully gone. The rural population still has a considerable anxiety regarding these habits, according to key informants.

Given that the rules guiding the behaviour of different professional groups are social and internalised from a very young age, it takes considerable time to change them. Even if they are not as pronounced as they used to be, they still form part of the identity of rural populations. We should therefore rather think in generations than in years when discussing the time needed for these taboos to loosen their grip on people's minds. This means that there are most probably hindrances remaining for the income diversification of peasants that are related to their reluctance to change.

Pooda argues in his study of different professions that considerable entry barriers exist to most activities that peasants may think of undertaking. Traditional

activities, such as blacksmithing or pottery making, involve dangers for the individual, according to traditional beliefs. Even if outsiders do not see these dangers as real, they are real in the sense that they constitute hindrances for all those who do believe in them or have internalised them through their upbringing. More modern activities, such as working as a mechanic or tailoring, are on the other hand not associated with dangers. But instead they require large sums of money for the investments needed. This is also a hindrance for many of the people living on the Burkinabé countryside (Pooda, 1992).

We might argue against the phrasing of the former hindrances as “entry barriers“, since this concept is usually used as an economic term referring to high economic entry costs. But they are nevertheless real barriers to people, and barriers which are guiding them in their economic behaviour. Another illustration of this relationship may be found with the help of a study undertaken by George Sam. In his investigation of how improved technology is introduced in agriculture he examines religious beliefs as one factor. The study was undertaken in Kayao department in the Bazega province on the Mossi Plateau (south of Ouagadougou) in 1990 and 1991.

By tracing the years when various persons invested in ploughs, Sam shows that Christians have been much quicker than animists or Muslims in investing in ploughs. 75 per cent of the Christians in the sample bought ploughs during the first ten years after the first plough was introduced in the department. The Moslems invested during the period ten to twenty years after the first introduction, a pattern also followed by the animists. However, after twenty years, only 58 per cent of the animists had invested in ploughs whereas corresponding figures for Moslems and Christians were 83 and 75 per cent respectively (Sam, 1991, p 34-38).

Sam’s argument is thus that religious belief is a factor that matters for investments and other economic decisions made by Mossi peasants. We may in this context regard his thesis as an indication of the influence that religious and other taboos may have on the choice of economic activities in rural areas on the Mossi Plateau. The result of his study may thus be seen as circumstantial evidence supporting our argument.

### **5.3 Hindering Institutions**

A theme running through this text is that indigenous institutions influence peasant behaviour to a large extent. In chapter 4, it was established that low reluctance to change is the factor that explains income diversification. Reluctance to change was seen as a possible indicator of the search for symbolic capital, or of the strength of indigenous institutions. We will now move on to discuss what the institutions referred to above look like, and how they function. Common for these institutions is that they are holding change back, and that they form part of the societal structure on the Mossi Plateau. Four institutionalised areas have been identified as particularly important: the importance of upholding social relations, the importance of a particular form of household structure as production unit, distribution and utilisation of land rights, and power structures in villages.

### *5.3.1 The Centrality of Relations*

Relations are legion in Mossi society. A city like Ouagadougou may sometimes be conceived as a small village since “everyone knows everybody“. How things work may be observed when conflicts occur between individuals. The pattern becomes particularly clear when foreigners are involved in the social interplay, since the differences in behaviour between different cultures render the Mossi behavioural pattern more transparent. Since the upholding of relations is a matter of utmost importance, a concept like truth becomes less relevant or of secondary importance. A factual argument need not be resolved through the establishment of facts, but rather through the creation of narratives that all parties may live with, without losing face. Even if anger and hard feelings remain, a quarrel is often settled when such a narrative is constructed, and things go back to normal. The social pressure from kin and friends forces the mending of relations. Hence relations are many times upheld without any sentimental basis, and in spite of the lack of agreement concerning factual statements (fieldwork).

In intimate personal discussions, it happens that Mossi people express their inability or reluctance to trust any other Mossi (fieldwork). Trust is a rare phenomenon. This is instead often replaced with strings and dependencies of other kinds. Gifts and counter-gifts play important roles in this sense. A traditional Mossi fable may serve as an illustration of the phenomenon of how gifts are used in order to create bonds and relations:

A hyena was walking along the road together with a hare. The hyena was bringing a goat, but noticed that the goat had problems walking because of a hurting paw. “I’ll cut it off for him“, the hyena said. The hare remarked that the goat would have even greater problems in walking on only three legs, but this did not stop the hyena. The paw came off and became a delicious mouthful, which made the hyena long for more. Soon only the liver remained of the goat. At this point the hyena realised that he had not shared anything with the hare.

“Here“, he said, “I’ll give you a gift, which I hope will please you.“

“Here, take the goat’s liver“ he said and handed over the last and best piece of the goat.

The hare thanked the hyena, took the liver, but said to himself: “this might create conflicts between us. It is better not to eat it now, in case I have to return the gift.“ He hid the liver behind his ears.

It did not take long before the hyena reminded him: “Don’t forget that I have given you the liver of my goat.“

“I won’t forget that. And as a matter of fact I’ve still got it“, the hare said, taking it out from behind his ears.

“But eat it then, I beg you“, the hyena said.

The hare put the goat liver behind his ears once again.

Some times later the hyena remarked that the hare had found something to eat.

“You’ve got a very nice calf there. Didn’t I give you the liver of my goat?“

“In fact you did. But if you are hungry you may very well have it back. I’m not really hungry“, the hare replied.

“No, not at all, I only ask you to eat it before it get spoiled.“

But the hare just put the goat liver back behind his ears.

(Laurent, 1998, p 232)

This fable tells us something about the role of gifts in the Mossi society. The giving of gifts forms part of what may be described as a symbolic economy. Once the gift is given and accepted, it binds the recipient to the giver for a long time. And since it is the symbol of giving, rather than the more prosaic value of the gift, that counts, these bonds go deeper than gifts and counter-gifts. Even if a counter-gift of the same value is given, the bonds remain. The receiver is obliged to help the giver out of any trouble, if the possibility exists.

But as the actions of the hare in the fable show, this symbolic economy is also used with artifice. Through cool calculation this giving or receiving of gifts is used in order to gain personal advantages. Pierre-Joseph Laurent even shows how giving gifts with artifice is seen as a virtue, a proof of intelligence (Ibid, p 233).

This giving of gifts appears in different walks of life. When someone is to see the chief regarding a problem or some other business, a gift is always brought, the size of which is decided by the importance of the matter. Another area of gift giving concerns marriages. Apart from the bride prices given in connection with weddings, the marriage as such may also be used as a gift. A traditional system called *pogsiure* binds three different lineages together. One lineage gives a girl for marriage to another family. If the first-born child of this girl is a boy, this child is returned back to the giving family. If it is a girl it is later on presented for marriage to a third lineage. This third lineage then has to return the first-born child to either of these families depending on whether it is a girl or a boy (Ibid, p 233). Human rights activists are fighting against the forced marriages that form part of this tradition.

At funerals or at weddings everyone that is invited is expected to give a gift to the family concerned. The size of these gifts determines the way the guest is treated during the ceremony, but also afterwards. Who is present at a ceremony and what kind of gift he or she has given is carefully noted, even if the number may amount to many hundreds of people. After the ceremony the family discusses these matters for a long time, in order to remember all those who were present. This process lays the foundation for future relationships. It is very important to uphold relationships between different families and lineages at these occasions. The bonds created are not only bonds between individuals, but more importantly bonds between lineages and groups.

Further examples of the practice of giving gifts in order to create bonds may be found in the way strangers are received. The stranger, who is highly esteemed, is always given a gift in return for a visit. The character of the gift depends on the status of the stranger. There is, however, a difference between giving gifts to those who are close and to strangers. Gifts to strangers fall more into the category of artifice, of tactics. Here it is clearly expected that the returns produced by the bonds created should be greater than the gifts given, thus producing a "profit" (Ibid, p 241).

Even in the very character of money, the means of exchange, relations are traditionally in-built. Historically, the *mooré* notion "ligdi" (money) referred to the cowrie shells. These shells were used as the means of exchange throughout West

Africa, and in the trade between coast people and traders from North Africa. The concept *ligdi* has later been transferred to the notes and coins that were introduced by white men. Originally notes and coins were called “*nasaar ligdi*”, but this latter concept has over time come to refer to money obtained from white men. Apart from its importance as a means for solving material problems, money also has an immaterial dimension within the Mossi society. Money is animated by the “*siiga*” principle, which implies that money will fructify if the social code for financial transactions is followed. For instance, it is not allowed to ask for a loan, or request reimbursement of a debt during nighttime. If this happens, such money will only create problems for the person receiving it. It is also mandatory to repay all one’s debts before one dies. Otherwise, it will be difficult to find the way to God. This is why the family at funerals asks any creditor to step forward so that any outstanding debts may be regulated. Hence, “*siiga*” exercises a social control on the use of money. Even when it comes to the way one uses money there are certain rules that must be followed (Ouédraogo and Ouédraogo, 1998, p 11).

“*Siiga*” thus represents the power that the creditor has over the money lent out. It represents a means of pressure on those who do not respect social norms in the utilisation of money. This could be with regard to upholding a contract entered into concerning a transaction. But *siiga* also represents the vital principle of money as a means of creating and upholding relations. Sanctions involved include the rejection of future credits. People are also eager to avoid the shame associated with the non-respect of contracts. It is also shameful if it becomes widely known that one is asking for a loan from someone. Credits are things that should be dealt with secretly (Ibid, p 11ff).

In the eyes of some people, the “*nasaar ligdi*”, the white man’s money, does not have the same value as “*ligdi*”. When obtained from e.g. a development organisation, this money may even be wasted, because one has not made any effort to obtain it, and it does not come with the relational strings attached as the “*siiga*” principle. To others, however, there is a fear of being caught by the police if not dealing correctly with such money, and therefore they do not misbehave. But even to this latter group, there is a difference in the way “*nasaar ligdi*” is viewed as compared with “*ligdi*” (Ibid, p 16).

Hence, it is through this system of giving gifts and making transfers that reciprocal dependencies are created. Through this system of symbolic exchanges, otherwise marginalised persons of the society may be integrated. The practice can thus be seen as part of a social security system. But given the widespread use of artifice in these activities, it might be interpreted as being a rational strategy as well. Given that the profitability of agricultural investments is often quite low, it may very well be a more profitable “investment” to give gifts to relatives, friends or even strangers. When difficulties arise the returns on these “investments” may not only be higher than the returns you might get from agricultural market-production but, more importantly, more timely. With the exception of gifts to strangers, it has to be noted, however, that such returns presume hardships of some kind. Without problems, you will not be able to reclaim the “returns” you are entitled to. It is thus not the kind of investment one undertakes with the aim of accumulating resources, but rather to avoid devastating losses.



One illustration of how this thinking works in a daily life situation came when a young, newly married couple became the victims of thieves. During a short honeymoon, all their belongings, and all the gifts they had received at the wedding, were stolen. A westerner reacted to this event by talking in terms of a “catastrophe” for the couple, but was corrected by a relative of the young couple. “This is not a big problem. They have each other, and they’ve got lots of friends. These friends will help them out. They will soon have everything they need again”, he said (fieldwork).

A system that creates social strings and attachments through material transactions and psychological bonds of indebtedness rather than through upholding honesty as a virtue will probably affect the functioning of the economy in various ways. Firstly, the level and character of trust in a society directly affects the level of transaction costs. With low levels of trust, efforts aimed at receiving information about the quality and quantity of goods and services traded, as well as efforts aimed at establishing and upholding contracts must be increased. This takes time, travelling, negotiation efforts, the establishment of sanctions, etc. – things that all create a certain inertia to market transactions.

Secondly, a system based on strings in the form of gifts and counter-gifts is important economically also in another sense. When people make such investments in relations, these become sunk costs that may not be retrieved if and when other paths are to be followed economically. Having invested in many relations, it would thus imply that it is not without costs to abandon such a system that builds on the continued upkeep of these relations. Hence, it becomes very important to continue maintaining these relations. Other investment opportunities may therefore be foregone, or at least difficult to afford. A situation of path dependency is developed. This latter effect may explain why such an institution as the comprehensive use of gifts and counter-gifts will be continued, in spite of its rather high economic costs.

By using the theoretical framework developed by Tillmar (2002) we may better understand the character and level of trust prevailing in the Mossi society. Trust is understood in her work as the “state of mind or willingness to accept vulnerability to actions of others based on positive expectations of their behavior” (Tillmar, 2002, p 289). She distinguishes between three levels when analysing trust: (i) the reasons why someone should be trusted; (ii) the level or reach of the trust; and (iii) the object that is trusted (Ibid, p 288).

In the first category, reasons for trust, she finds formal institutions that create trust through their means of enforcing sanctions, indigenous institutions that create trust through their capacity to hold someone hostage through different forms of social pressure and thirdly agency, that is the characters of individual persons. In the Mossi society, it is quite clear that the major reason why some trust should exist is the existence of indigenous institutions that may hold people hostage in a social way. Formal institutions may impose some fear, but this is a minor factor in comparison. Individual character does not seem to be a reason for trust, since people explicitly express that they “cannot trust anyone”.

In the second category, the level that is in focus when speaking of trust, Tillmar distinguishes between the general (referring to society), category (referring to ethnic and other distinguishable groups) and specific (referring to individuals) levels. In the Mossi society, it is rather category trust that prevails, since the general level of trust is low or non-existent, as the specific level of trust is too. This judgment is reinforced by the tensions existing between different ethnic groups. However, this is not to say that co-existence between ethnic groups is difficult. Burkina Faso is rather exceptional when it comes to the low level of conflicts between ethnic groups, and in the functioning of conflict management, as compared with other African societies.

The third category relates to the objects that are to be trusted. Tillmar distinguishes between the commitment of people, their goodness and their capability to actually do things that are expected of them. In the Mossi society it is commitment and capability that are the objects of trust. The commitment stems from the negative pressure of avoiding shame or other negative things. Positive attitudes clearly play a minor role in this setting.

What would then this level and character of trust found in the Mossi society mean economically? Before we try to answer this question, we need to take a closer look at what the basic unit of production looks like. By investigating the household more closely we will find out more about what the bases for trust in the Mossi society are, as well as which economic effects trust may have in this setting. At the same time we will be studying the next institution that may serve as a hindrance to diversification and/or economic dynamism.

### *5.3.2 The Household as Unit of Production*

Another issue found to be of great importance is how and in what ways the household is maintained as the fundamental unit of production. The question of generational gaps has been treated to some extent above. The most important basis for these gaps is the process of modernization and/or individualization. Household structures are under pressure, as more and more economic activities become the realms of individuals rather than of households. This shift is taking place in e.g. dry season cultivation of vegetables as well as in work migration. Earnings that used to be controlled by the household head are increasingly becoming the property of those undertaking the work.

The extent to which such changes have emerged varies between villages and households. But in order to understand the character of the changes it is necessary to describe a baseline position. Such a position may be derived from the stories told by older interviewees when referring back to the old days. Historically, the household head carries the responsibility for providing enough cereals for the whole family for the whole year. In order to fulfil this task, he has the right to call upon any other family member to work on the fields during the cultivation season. He may also call upon family members to undertake other tasks during the dry season. The household head takes any decision concerning cereal production or the use of household money. The wives, to the extent that there is more than one in the family, are responsible for cooking one day each. They get a share of the cereals

from the household head, and they are supposed to provide the “sauce” that goes with the cereals from their own respective fields.

Women thus have their own fields to cultivate. Work on these fields may be undertaken before and after the regular and regulated work on the household fields, as decided by the household head. Albeit having own land to cultivate, women may not inherit land, nor do they have any secure access to their fields, since they are borrowed from the household, and may be retained for other purposes by the household head if he so wishes.

Sons or brothers of the household head that live in the household are supposed to work on the common lands. If they migrate to work, or undertake other work during the dry season, they are supposed to hand back all their earnings to the household head, before they possibly get a smaller reward. In the baseline position, then, the household constitute the basic unit for production and economic decisions. Individuals have different, but subordinated, roles to fulfil.

The economic transactions of Mossi households have been studied closely by Gérard Ancy (1983). In 1975 he undertook a study of monetary transactions and relations within Mossi peasant households. One of his starting points is the dual foundation for authority in the Mossi society: the social and the economic spheres. Whereas authority has traditionally rested on both these foundations, he notes that commercial activities and work migration are increasingly undertaken by young male members of the households, and that these economic activities are becoming parallel monetary circles, more or less closed to the farming economy. This fact is also broadly supported by findings from fieldwork undertaken for the present study. Hence, household heads are running the risk of having their authority undermined, because financial resources within the household are increasingly escaping their control. However, as Ancy notes, there is a remarkable resistance in the social sphere to the influence from the economic sphere over issues of authority. Household heads continue to make the important production and consumption decisions (Ibid, p 23).

Ancy argues that the main reason why this authority is upheld, in spite of increasing flows of money circulating in intra-household spheres more or less cut off from agriculture, is that no market value is ascribed to land. It is, according to Ancy, commerce and redistribution rather than agriculture as such that have been commercialised in Burkina Faso. And it is principally because the household heads continue to control the lands that they retain their social standing (Ibid, p 24).

What then about these parallel circuits of money? In an attempt to measure the structure of incomes and expenditures, Ancy found that in Zorgho the incomes from work migration constituted 24,3 per cent of total gross income, whereas sale of farm produce constituted 46 per cent, and other commerce 29,7 per cent. To the extent that younger male members of the household controlled commerce and work migration incomes, they consequently controlled a larger share of the financial resources than the household head. This was also the case in other areas studied (Ibid, pp 76, 80, 91). Gérard Ancy already found these relations in the mid-1970s. Today, there is a difference to be noted between different villages regarding the extent to which economies are separated within households. In Rapougouna,

Yatenga, more household heads continue to have some influence over total incomes than in e.g. Zambanga or Bango. Hence, it is more common that household heads in Rapougouna send their sons or brothers to undertake work outside the farm. Consequently household heads in Rapougouna have a larger say in how such earnings should be spent. Seen as a whole, it is striking that Ancey's results seem to be fairly relevant even today. Progress has been surprisingly slow in this area the last 25-30 years.

Interviews show that a majority of those who cultivate vegetables during the dry season are young men, who control their incomes individually. They usually contribute to the household economy, but they control individually the larger share of their incomes. We may study things from the other angle, from the villages of origin, which do not have dams that attract vegetable growers during the dry season. Here we find slightly less of the individualization that we find in villages with dams that attract dry season cultivators. Gandaogo is an interesting case because we have analysed it within this study, and so did actually also Ancey in the 1970s. Hence interesting comparisons are possible.

An interesting fact that Ancey notes is that households in Gandaogo, as opposed to households in other parts on the Mossi Plateau, contain only one production unit. This, he argues, has to do with the system of succession. In Gandaogo the normal way is for the eldest son to inherit the land. Hence, younger brothers of the household head should start their own households rather than wait for their inheritance. In other parts of the Mossi Plateau, more than one production unit live together in the same "zaka" (household), but this is not the case in Gandaogo (Ibid, p 44-49). This continues to be the prevailing pattern in Gandaogo even today.

When Ancey illustrates the intensity of financial relations between different subgroups of the household (sons and their nuclear families, brothers and their nuclear families) he finds that such subgroups function in reality more as economic subunits. Financial transactions are much more common between the household head and his wives, children and their wives, brothers and their wives than between the household head, and his children or brothers. In Gandaogo, furthermore, there is even a complete absence of financial transactions between married children and married brothers. This is, according to Ancey, because they do not live in the same household, which they would do in a normal Mossi village (Ibid, pp 33, 48f).

Emerging from the current fieldwork is that women have taken on a much more important economic role as compared to the mid-1970s. The vast majority of traders at the local market are women, and those who sell food or other processed items have initiated this during the last ten-year period. Even without quantified measures of transactions, it is evident that the households have become less important as economic units, and that in addition to the subunits found by Ancey, women have taken on a greater financial autonomy. This they have done through an expanding trading activity. On the basis of our interviews we may also state that the economic sub-units found by Ancey continue to be of importance, since women use income from their trade in order to reinforce household agriculture. Hence, transactions continue to be undertaken within households, and within the household subunits.

Clearly, households are becoming less and less relevant as production units, since increasing shares of their economic activities are undertaken by different household subunits building on rather closed monetary circuits. Money from complementary activities is to a decreasing extent channelled into the economy of cultivation. The household remains a production unit regarding traditional agriculture, but other activities are to a limited degree integrated into the agricultural economy. At the same time, the household remains the natural and widely accepted basic unit for agricultural cultivation. According to Ancey, the main reason for this is that land has not been ascribed market value, and may not be traded. Because of its special importance as a factor of production, and because of its cultural and religious importance, land is able to socially uphold the authority of those controlling it – the household heads.

The upholding of this authority is also visible in the partition of the capital that really counts in the Mossi society – cattle. Ancey shows that the higher the status among the men in the family, the more cattle they control. Those with lower status may have higher shares of radios or bicycles, but when it comes to cattle the relationship is straightforward. The lower the place in the family hierarchy, the larger the share of small animals instead of cows, or birds instead of goats and sheep (Ibid, p 178f).

This duality in the way resources are measured is, according to Ancey, the reason why many have found the Mossi society contradictory. Some have claimed that it is a very hierarchical society, whereas others have claimed that it is egalitarian. There is a truth in both positions, since money may be fairly equally distributed amongst different members of the household. At the same time, the capital that really counts – cattle – is not equally distributed. And land is still controlled by the household heads. Hence, lines of authority are upheld even if individualization creates increasing financial and other spaces for women and especially young men (Ibid, p 178).

We have thus found that the traditional household structure – even if it is under continuous restructuring – serves as an institution that hinders diversification and economic dynamism. Mainly those members of the household that have positions somewhat lower in the hierarchy are free to undertake alternative, more profitable, activities than the growing of cereals. But even these members are also to some extent hindered by demands for participation in the common activities of the household. The hindrances lie mainly in that the household becomes fragmented. Neither pure individualism, nor efficient division of work within the household unit, becomes possible. We may return to our previous discussion on trust to see why this is the case.

We recall that by using the Tillmar scheme we find that reasons for trust in the Burkinabé society stem from indigenous institutions that hold people “hostage” through the mechanism of social norms. The “level of trust” that is focussed in Burkina Faso is category trust, and further it is the commitment and capacity of people that are to be trusted. In processes of individualisation, such as those we have observed while studying the evolution of Mossi households, it would be a logical consequence that trust that is built on these components is diminishing. Individualisation, albeit slow, would mean that categories become less relevant as

bases for entering into transactions. It would also mean that the commitment of people is decreasing, since opportunities for cheating increase when contractual relations become more temporary through the geographical expansion of trade and markets.

In such a situation it is possible that indigenous institutions – as a reason for trust – are even more adhered to in order to compensate for the losses of trust related to the other channels discussed. It might be that the adherence to those indigenous institutions that we have observed above is related to this process of decreasing levels of trust.

We have also seen that land tenure and lines of authority may be further ingredients in the structure that serves as a hindrance to diversification and economic dynamism. To these ingredients we will now turn.

### *5.3.3 Customary Land Tenure*

Traditionally in rural West Africa migrants (“strangers”) may obtain relatively lasting rights to land from the original inhabitants in an area, the group that controls the lands. The starting point is that land is a living entity under the control of the local group that first came to settle the area. Land has linkages to ancestors and supernatural forces; hence it has a religious role to play. On this basis, land is the foundation for community life and for social cohesion (Savonnet-Guyot, 1986, p 103f, Lavigne Delville et al, 2002, pp15ff).

When a stranger arrives in a village, he may contact a lineage chief, or the land chief in order to ask for a piece of land to cultivate. A plot of land is usually granted to him, and often on a long-term basis. The precondition is that the stranger acknowledges that the indigenous group has the right to control the land, and that indigenous authorities are to be respected. In this way, the stranger enters a dependent, subordinate, relationship. This relationship is confirmed through the offering of, most often symbolic, compensation. Parts of the harvest, or other gifts, are offered regularly in order to express gratitude (Mathieu et al, 2002, p 111f). This giving of symbolic gifts is continued when younger generations take over from older ones, since the rights to use the land often span over many years.

There are rules regulating how these tenure rights may be exercised. The migrant may not plant trees, dig wells or in any other way make long-term investments on the land borrowed. This would be seen as him starting to regard the land as being under his permanent control. He may, however, cultivate the land - and as long as he continues to do this on a regular basis, as long as he respects local rules and taboos, and as long as he remains on good terms with the landholder, the indigenous person in control of the land cannot withdraw this right (Ibid, p 112).

A recent study concludes that these traditional forms of transfer of land rights are being gradually transformed and replaced, at least in the south-western part of Burkina Faso. In this cotton growing area, which is economically expansive, more market-based transfers of land are slowly emerging. This process of commoditisation of land is, however, still very much socially embedded. Great efforts are made to make new forms of land transfer look as if they comply with

tradition. Those actors that are most flexible in combining the norms of tradition and norms prevailing in a market-dominated society are the ones gaining most in these processes (Ibid, p 126).

Since the revolutionary years in the 1980s, a Land Reform Act has been in place (Réorganisation Agricole et Foncière, RAF). It was first established in 1984, but was later revised in 1991 and 1996 (Lavigne Delville et al, 2002, p 17). This act defines all rural lands as a “national domain” that belong to the state. It is, following this act, only the state that has the right to allocate lands. But in practice, the state has insufficient outreach, and not enough authority to implement the RAF, hence customary tenure systems are still applied in most instances. When someone turns to the “délégué” or any other local representative of the state in a matter over land, most often these hand the issue back to the land chiefs or to some other authority in the customary system. The “délégués” seldom consider themselves to have enough authority or means to solve disputes over land.

In spite of all these shortcomings of the state system, and the difficulties in implementing the RAF, the land reform act has contributed to the erosion of customary tenure systems. This has resulted in confusion, especially since tradition and custom continue to be of utmost importance as sources of legitimacy and authority. Hence, there is much ambiguity because of co-existing tenure systems, and unclear boundaries between them.

However, on the Mossi Plateau, land tenure still follows the customary system. We may take the village of Korsimoro as an illustrative example. This is a village where we ought to find market based transactions spreading because Korsimoro is situated some 70 kilometres Northeast of the capital Ouagadougou, along the road towards the rural towns of Kaya and Dori. When a dam was constructed in this village some 17 years back, the value of the surrounding lands greatly increased. These lands could then be used for the profitable cultivation of vegetables. In spite of that, surprisingly little market exchange of lands has emerged, even though a long time has passed. Few of the original inhabitants around the dam are growing vegetables, mainly on a small scale, and few outside private investors have appeared. Lands are still lent out to groups and individuals asking for the right to cultivate during the dry season. But no charges are involved, apart from the culturally induced gift that is given after the harvest.

How could this be understood? Those controlling the lands in the area are voluntarily giving up either income from vegetable cultivation on a larger scale, or the fees that could be gained by renting out the land they control. The members of groups are voluntarily relinquishing a possible expansion into larger areas of cultivation in order for other people to join them in their production, thus increasing the competition on the market. What is the basis for such decisions?

The answers of cultivators, when asked, are that they lack resources to cultivate larger areas. Since they cannot afford to buy a motor pump on their own, they need to stick to the group, they claim, and to stick to the rules that the group upholds. Regarding those who control the land, the argument follows the same line. It is impossible for one household to manage the labour intensive irrigated cultivation of vegetables on the large area they use for growing cereals. There is a lack of both

means for buying a motor pump, and a lack of labour, it is argued. On the other hand, by lending out land they get the advantage of having their lands automatically fertilized, which increases their cereal harvests.

This line of reasoning builds up to an argument about entry barriers hindering small-scale peasants from expanding into larger scale cropping. When asked why they were not using those credits that actually are available in order to overcome at least some of these entry barriers, the usual argument is that people in general are very scared about becoming indebted. It is argued that there exists a social pressure not to build up debts.

There remain however some weak links in this chain of arguments. Why would those who control land abstain from charging a fee from those who use their land? And why is there no difference in the willingness to take on risks - and thus loans - between different individuals? Why have not at least a few individuals been able to accumulate some more resources in order to expand their cultivation during the years the dam has existed? Or, put differently: Why are not the differences between individuals greater?

When going beyond the answers given in the first place, a different picture emerges. Through repeated questioning and through information from key informants we get to know that there is a strong norm and a strong practice saying that conflicts over access to land should be avoided: "If you get into a fight over lands, your harvest will fail" is one way of putting this. "If someone refuses to lend out land to a person that asks for it you would wonder whether this person really is a Burkinabé? Burkinabé people are always generous when it comes to lending out land", is another comment.

There are two aspects of this norm. One is the taboo-like perception that something bad will happen to you if you do not follow the norm: your harvest will fail or you will fall sick. This might happen either automatically or through the use of black magic. Even people who have quite some level of western education share such a belief. Hence, it is a deeply rooted perception. The other aspect is that a person that refuses to lend out available lands to those in need is not developing social relations. And such an isolationistic approach is not well regarded. If you later on really get into some trouble, there will not be others around to help you out. The basis for the norm seems to be the importance that is placed on redistribution and on matters of identity in Mossi society.

This second aspect connects back to our previous discussion on relations. In times of hardship you need the assistance of others. And through your behaviour in good times, you are preparing for the way you will be treated when you get into trouble. This is something that becomes obvious through the way people treat their cereal harvest, through their practice of giving gifts, through their way of organising themselves into groups, but also through their way of treating questions related to access to land.

When a conflict over land arises between young men they turn to their fathers in order for the elders to negotiate a solution on their behalf. If there are no older people available in the family one turns to the village elders, and ultimately to the land chief in order to have the dispute settled. The land chief has a more deeply



rooted relationship to the land than others. He is a descendant of the family that first settled in the area and therefore bears the original right of using the land. This right, and the land chief's relationship to the land, has religious dimensions.

The roots of the land allocation system are to be found in the history and mythology of the Mossi people. Being descendants of the princess Yennenga, the Mossi are held to originate from Gambaga in the north of presentday Ghana. While most other ethnic groups in Burkina Faso have drawn their lines of authority either from age or seniority in being present on a special tract of land, the Mossi have invented the concept of "naam", a force emanating from God which makes it possible for some to command over others (Savonnet-Guyot, 1986, p 86f).

Historically this concept made it possible for the Mossi to be conquerors, given that they did not have to obey the authority that emanated from the land. They were thus not bound to specific tracts, and with the help of their superior warring capabilities they were able to take control over what is now called the "Mossi Plateau" in the 15th century. The original inhabitants of the plateau were soon integrated into what became a Mossi society. The divide between conquerors and conquered has however remained, and even today it is possible to distinguish the "men of power" (nakombse) from the "men of the land" (tengbiise). It is still the latter category that produces land chiefs and upholds the linkages to the land in a way that is consistent with their animist beliefs (Laurent, 1998, p 35ff).

Land is thus still allocated according to principles that are rooted in both history and mythology. We are faced with a strong institution in that its basis is both religious beliefs and tradition.

#### 5.3.3.1 Land Tenure and Economic Efficiency

What are the effects in terms of economic efficiency of a land tenure system of this kind? We may, with Lavigne Delville et al, define efficiency in this setting in the following way:

"A given contract will be considered as "efficient" if, within a given distribution of production factors between different parties, it allows the best possible allocation of those factors on the plot in comparison with other forms of use; at macro level, the optimum is reached when the circulation of land rights leads to efficient use of the majority of the plots" (Lavigne Delville et al, 2002, p 88).

From a methodological point of view it would be preferable to deal with the matter of efficiency through the use of econometric methods. This means that there are problems with this matter in Sub-Saharan Africa. Not many studies have been done, and the statistical data used is often of a poor quality. Hence, there are very few rigorous research findings to rely on. What has to be used instead is reasoning and arguments stemming from different case studies (Ibid, p 88).

When studying agrarian contracts, one can not treat the issue of efficiency in isolation. Matters such as market imperfections, risk, unequal access to resources and transaction costs need to be taken into consideration simultaneously. Take for example the issue of market imperfections: if efficiency in the "land" market is

discussed in isolation, wrong conclusions may be drawn. If there are imperfections in products or labour markets, a “well functioning” land market may not at all produce the expected results in terms of efficiency, because these markets are dependent on each other. Furthermore, the presence of risk may create a situation where “the best possible allocation of those factors” is not necessarily the allocation that produces the largest quantity of output in a given season. Farming practices that give lower, but more secure outputs, may be preferred. And transaction costs may lead to a situation where longer-term contracts turn out to be more efficient in the long run, even if their short-run efficiency is lower than it potentially could be.

Taken together, this means that a discussion on the economic efficiency of tenure systems needs to be multifaceted. The discussion needs to establish what the optimal possible outcome of land use is in terms of production, it needs to take a farming systems perspective or even broader, rather than a narrow land-centred perspective, and it needs to establish the relevant time frame for measuring efficiency. In short, there is no objective truth about what efficiency is. It is partly a value judgement, where different factors need to be weighted against each other. It all boils down to what one reads into the phrase “the best possible allocation”.

The customary tenure system we are dealing with here may be classified as a system where rights are derived, or delegated from the person who controls land. They are not ultimately transferred, but let out for a shorter or longer period. The contract establishes a situation of dependency between the two parties involved. This creates a situation where we may find mutual or conflicting interests between the parties, because this kind of contract establishes an ongoing dynamic relationship.

A common position is to regard these dynamic relations as expressions of economically in-efficient contracts. Absolute ownership is not transferred, and hence the legal situation remains open to more than one interpretation. This is often seen as an insecure situation, in the sense that it may be changed, should conflicting interests and interpretations surface. This mainstream position, that ITR systems (Individualisation, Titling and Registration) per definition are more secure, has, however, been fundamentally challenged (Bruce, 1993, Bruce and Mighot-Adholla, 1994, Cornia, 1994, Place and Hazell, 1992, Platteau, 1995, 1996).

A previous mainstream position within the economic literature claims that land titling or fully developed property rights is the only way to restore the growth potential of African agriculture which is subject to high population growth and increasing commercialisation of agriculture (Falque, 1986, p 44). The emphasis is on the positive effects that fully developed property rights will have on resource allocation, capital accumulation and land conservation. Reduced uncertainty as to land transactions will make it easier to transfer land to more dynamic farmers and excessive fragmentation and sub-division encouraged by the customary ownership systems will be avoided. With titles, land could easily be used as well as a collateral for securing credits. In Kenya the individualisation, titling and registration, ITR, approach was inspired by the British colonial state’s so-called “Swynnerton plan” focussing on intensification of African agriculture in the

country (Kanyinga, 1997). Kenya embarked upon extensive land registration schemes in the 1950s, which were carried over to the post-colonial period.

Few African countries have followed the ITR path. Based on this, another strand of theoretical reflection raises doubts about the effectiveness of land titling as a means to enhance agricultural growth and to increase the security of tenure (Bruce, 1993, Bruce and Migot-Adholla, 1994, Cornia, 1994, Place and Hazell, 1992, Platteau, 1995, 1996). This position states that land registration, on the contrary, creates increased insecurity for vulnerable parts of the population, it does not activate the land market, and if it does, it is mainly for speculative reasons. Land registration does not bring about a reversal in land fragmentation nor does it improve land allocations. Neither does land registration in significant ways improve smallholders' access to credit, and there is no significant correlation between land titling and increased agricultural yields.

Research from Ghana, Rwanda and Uganda shows that no systematic evidence can be found for households with complete transfer rights of their lands taking more loans or investing more in land than households with less developed property rights (Place and Hazell, 1992). The policy implication is not that land registration is incorrect, but rather that it needs to be accompanied by other types of reforms that can break down the various constraints working on African agriculture, e.g. lack of sustainable technological packages, weakly developed infrastructure, including rural roads, poor input delivery systems, output marketing systems and extension services. The withdrawal of the state and the opening up for the private sector to engage itself in these areas, has not led to any significant overall improvement, although exceptions exist.

A subsequent position, developed in response to the earlier ones, argues that explanations that refer only to the non-tenure constraints on African agricultural development are unconvincing, because they overlook the poor fit of private property rights to current realities in African rural settings (Platteau, 1996). This position argues that (i) tenure regimes in Africa are already evolving towards individualised ownership (DfID, 2002), (ii) land purchases represent primarily attractive investment opportunities for high-income groups which may not imply the effective use of land, (iii) in customary tenure systems, access to land is embedded in social relations, norms and traditions and is associated with symbolic meanings. In such a context, the sales value of land will exceed economic based value calculations, implying that land cannot readily be transferred from less to more productive agents and (iv) the cost of maintaining a proper land registry of comprehensive land titling programmes is very high. This has caused land holdings, such as in Kenya, to be largely unregistered (Platteau, 1995, Kanyinga, 1997, DfID, 2002).

DfID's recent review of African experiences shows that the replacement of customary land ownership systems with ITR systems has generally failed, a major reason being that they are culturally and socially inappropriate. Further it is confirmed that land registers have been difficult to maintain and that customary norms and practices have shown remarkable persistence as a basis for land allocation, transfer and inheritance. The introduction of ITR is often shown to have undermined established multiple and subsidiary rights, e.g. those of women and

weaker groups, while consolidating those of registered owners (DfID, 2002, annex 1). With women being the main suppliers of food for the household and feeding of the children, individual food or nutrition security can be endangered and poverty deepened through lack of access to land by weaker groups.

But why is it a problem that tenure systems are culturally and socially inappropriate? Why should this lead to them not being efficient? The answer may lie in the concept of tenure security. The supporters of the ITR perspective claim that this is a more secure tenure system, that it creates better predictability. But is that really the case in settings where the juridical system is corrupt and malfunctioning? And more importantly, is it possible to uphold an ITR system given that the level of trust is higher in other institutional systems than in the juridical one? In such a setting other contractual relations than legally binding transfers of ownership may actually be more secure.

The matter of security may be seen from different angles. The ITR approach places heavy weight on legal security. Rules and regulations need to be clear and undisputable, and applicable in a practical way. A related aspect of tenure security is organisational security. There is a need for functioning mechanisms, structures and bodies that are able to manage land use and deal with land conflicts. A third kind of security is contractual, that is depending on the clarity or vagueness of the contracts established. If any of these aspects are not functioning well, they become different sources of insecurity (Delville Lavigne et al, 2002, p 76f).

As we have alluded to above, there is a possibility that legal security, and hence the absolute transfer of ownership, is not the greatest source of tenure security in many Sub-Saharan countries (Le Roy et al, 1996, p 49). There are historically two distinct ways of perceiving the concept of ownership. According to the tradition following John Locke, the right to own or control land is established through the mixing of one's labour with the land. The other tradition, following Immanuel Kant, argues that there is no other basis for ownership than social legitimacy. For instance, "The valuation of a space is intimately linked to its socialisation", writes Comby (1991, p 17). If negotiation, and social legitimacy of land rights, is what it takes to gain tenure security, then the sources of this would look very different in different societies and in different periods of time.

#### 5.3.3.2 Efficiency on the Mossi Plateau

If we now return to the pattern prevailing on the Mossi Plateau we have noted that there is an important difference in land rights transfers undertaken within the family as compared to land rights transfers to "strangers". People that come and ask for land may borrow it for a long period of time, given that they follow the rules described above. They must show their obedience, their inferiority, in relation to those whom they have derived their rights from. This is a reflection of the fact that there are different kinds of social relations within the family as compared with relations outside it. And, as Lancian Paré writes:

"Although arrangements are entered into through negotiation, it is the quality of the social relations between parties (assistance provided etc.) that maintains

them, determines how long they last and, finally, represents the main factor of stability or challenge.” (Ibid, p 82)

It is the legitimacy of the contracts that renders them safe, rather than any formal character they may bear. And this legitimacy stems from the social acceptance of the contracts and the institutional setting in which the contracts are entered into. On the Mossi Plateau, legitimacy in the institutions managing land tenure is created and upheld through the strict adherence to rules that guides the way relations ought to function.

What we may observe in terms of economic efficiency is a dilemma. In order to obtain tenure security, based on social acceptance, strangers borrowing land need to give up rights of a kind that would give them incentives to make long-term investments in the lands: planting trees, digging wells etc. The decreased farming productivity that follows is a price to pay in order to obtain tenure security – which is held to be necessary in order to have the right incentives to make long-term investments and hence increase agricultural productivity.

There remain a number of aspects to deal with before we may make a concluding judgement of the efficiency effects of the tenure system prevailing on the Mossi Plateau. It is a general observation that in the absence of economies of scale it is not the size of the cultivation that decides the efficiency in allocation of production factors. It is rather the case that family farms may use family labour and thus acquire advantages as compared with farms hiring labour: this way the costs involved in seeking and recruiting labour become unnecessary. Furthermore, family labour needs less monitoring, since they have greater incentives to work hard than hired labour. Hence, the inverse ratio between farm size and productivity found in many studies implies that land ought to be transferred to family farms (Ibid, p 90).

But this general observation may not be valid in settings with non-functioning credit- or input markets. With malfunctioning credit markets, large-scale farmers may have easier access to credits or inputs. Such an advantage might then outweigh the advantages that family farms have in the labour market (because of their lower transaction costs there, as described above). Hence, final assessments need to be made through analysis of the interplay between all the different relevant markets. Furthermore, situations of risk may result in land transfers being undertaken due to other reasons than allocative efficiency. There might be a need to sell or rent out land because of immediate distress.

Now, in the four villages studied, we have not found any large-scale farmers that have distinctly better access to credits or inputs than others (refer to factors I and C in truth tables). Access to credit, and with that to farm inputs, comes through the cultivation of cotton. Inputs are, in the majority of the cases, used on the cotton fields, and land allocation is not to any larger extent affected by cotton cultivation. Cotton is cultivated on lands that are already controlled, and seldom on lands that have been acquired specially for this purpose. Hence, credit or input markets do not disturb the efficient allocation of land.

Neither have we observed any cases where land has been abandoned because of distress. This was in spite of the fact that one of the cultivation seasons when

fieldwork was conducted turned out to be a really bad year in terms of harvests. Risk is prevalent, but it does not disturb the functioning of land markets or tenure systems.

#### 5.3.3.3 Conclusion About Land Tenure

The major source of in-efficiency stemming from the tenure system used on the Mossi Plateau is the use of derived rights in relation to strangers. When these borrow land, they are obliged to adhere to rules that prohibit them from undertaking investments that conserve land. This is necessary if they are to obtain security in their land rights. Hence, this turns out to be a dilemma: to obtain the security that is needed for an efficient use of the land, investments that would increase the efficiency must be foregone. This is so, because there are no legitimate institutions that might have been able to provide alternative bases for tenure security.

Land is thus still allocated according to principles that are rooted in both history and mythology. We are faced with a strong institution in that its basis is both religious beliefs and tradition. The norms that regulate land management are also upholding structures of authority in households, as discussed above. But such structures of authority may also be seen in a wider village context. To this we now turn.

#### 5.3.4 *Hierarchical Structures of Village Power*

There is a methodological difficulty related to the studying of power relations in villages. Power structures are not easily visible to outsiders, and every explicit attempt at studying them will be met by suspicion and efforts to cover up the real issues. The question is how to observe relations that are deeply rooted, and at the same time are actively hidden away from outside observers. To put questions to people about such things, in interviews, in focus groups, through participative methods etc, is not enough, since all those involved have a role to play, and this may bias the answers given. Hence, I have chosen another, more indirect, approach. By the study of organisations active in villages, we may get a picture of how power relations function in one particular area. These insights may then be transferred to a discussion about power structures in the villages more generally. This method builds on the insight that organisations ought to be seen as integrated parts of the society in which they function, rather than as isolated entities. That means that an organization in West Africa is something very different from an organization in Western Europe for instance (Brunsson and Olsen, 1997, p 4, 7f).

On the Mossi Plateau in Burkina Faso, a number of peasant organisations have evolved during the last twenty years. These organisations have seen daylight and grown in a setting where interventions from Western development NGOs have interacted with the dynamics of a traditionally dense society undergoing cultural change due to an increasing exposure to the surrounding world. We will here argue that the result of this amalgam has been a complex combination of patron-client relationships, formally democratic structures and a web of interpersonal relations that contributes to a structure of power, which is tightly knit.

This argument will build on case studies of two Burkinabé peasant organisations, combined with more general observations of a larger number of other peasant organisations. All of them are situated and work on the Mossi Plateau in central Burkina Faso. The two organisations that have been studied more intensively have been chosen as cases because they represent very different internal structuration and working approaches. Hence, the logic followed in the selection of study objects is that of a most different cases selection. As we will see, the similarities are nevertheless great, a fact that supports the thesis that one could talk about the existence of a common norm regarding peasant organisations in Burkina Faso.

The method used during these case studies has been participatory observation and the reading of different forms of evaluative studies and internal documents of these organisations. A methodological problem has been that the participative studies were not initially planned. The knowledge about these organisations was built from information gained through another job position that I was holding parallel to conducting research. For ethical reasons these organisations will therefore be described without the mentioning of names or other details that may reveal their real identity. All written sources are also referred to without mentioning the names of the organisations.

#### 5.3.4.1 Organisation A

Organisation A was formed in the early 1980s, during the time when the Sahel area was struck by severe droughts. Like many other organisations in Burkina Faso, A was started through the initiative of a charismatic leader. The message given by the initiators was basically that the population had to lean on its own resources and to develop a capacity to negotiate with outside donors if they were to be able to improve their living conditions. Some initial actions were undertaken, and the success of these managed to convince both local villagers and foreign donors that this newly constituted organisation could be trusted (Réseau MARP, 2001, p 7).

This led to the geographical expansion of the zone of intervention and the diversification of activities, which over the years developed into what may be called an integrated program for rural development. The different components in this program are health, education, soil and water management, formations in civic rights and other minor areas. The logic behind this approach is that in a situation of extensive needs and a massive lack of resources, concerted action needs to be undertaken if peasants are to be able to initiate a sustainable development process.

During the 1990s the organisation went through a period of professionalisation and structuring. Activities started to be undertaken in the form of larger programs and the infrastructure of the organisation was reinforced through the recruitment of staff, vehicles and an office.

The organisation has throughout the years been able to build confidence and establish links with highly regarded international NGOs that have been funding several programmes. To meet the requests and assumptions of these foreign partners, A has since the early years upheld a structure in which representatives from village groups meet in an annual general assembly. This assembly elects a governing board. The executive secretary, the person that once initiated the

organisation, reports to this board. He has a technical team at his disposal that mainly consists of field workers and administrative staff.

In the eyes of the foreign partner organisations A seems to have a democratic structure with good representation in the village groups at the base. Both men and women are actively taking part in the activities of the organisation. This is a fairly rare phenomenon, since gender relations usually follow strict traditions in Burkinabé villages. The activities have over the years been conducted with the active participation of members of the village groups. In some villages participation has been very low or even non-existent. But the overall impression based on the participation in the activities undertaken has however been that local participation in the programme is good. Foreign partner organisations have shown a greater confidence in organisation A than in other comparable organisations, when it comes to funding and funding practices.

There are however some additional observations to make about the internal structure of the organisation. The first observation is that the executive secretary has a very central role in all aspects of the life of the organisation. And in reality there are no checks and balances in the financial system of the organisation. Financial control is concentrated to the executive secretary. There is another person charged with handling the economy, but that person is lower in rank than the executive secretary, and there are no control mechanisms in the daily procedures of recording expenses. The position of the executive secretary is also strengthened by the fact that he holds a position on the governing board (Réseau MARP, 2001, ACCES International, 2001b, 2001a).

The second observation is that there exists a layer of actors between the governing board/executive secretary and the village groups: the zone representatives. Their role is not clearly defined, and one organisational study describes their actual function as "indigenous field workers": they serve as some kind of go-between between the villagers and the leadership of the organisation (Réseau MARP, 2001).

In the eyes of northerners - who have the ideal of a democratically constructed organisation as their point of reference - the high concentration of power in the hands of the executive secretary has been understood as a necessary deviation. The founder of the organisation has to be in control in order to guarantee the continuous peasant character of the organisation. This has especially been an argument forwarded in times of restructuring. The peculiar structure with the zone representatives has been rationalised as being a minor point, a sacrifice on the altar of accepting an indigenous tradition of hierarchical systems.

A third observation to make is that at least 19 of the 70 village groups included in the programme are non-performing. Activities planned in these villages are not undertaken at all (ACCES International, 2001a, annexe 5). In still other villages activities planned are only partly undertaken. A case study of one of these non-performing villages - a village that once upon a time took an active part in forming the organisation - shows that people there have not even used sacks of cement given to them without charge for the purpose of constructing basins for composts. These sacks remained where the field workers had put them. Such behaviour indicates that there must be something wrong with the relationships between the



organisation and the villagers. If something valuable is given free, every rational actor would use it, if there were no strings attached. The explanation proposed by the evaluators is that people in this village are more interested in their individually based cultivation of vegetables than in engaging themselves in collective schemes for increasing cereal production (Ibid, p 20f). Such an interpretation could be discussed, however. If villagers in this village are more individually oriented - would they not see to it that they use every opportunity available to increase their personal incomes? Would not free sacks of cement have been used for one purpose or another? Is not it more probable that the utilisation of the cement would have implied other prices to pay in the form of social obligations?

Hence, when after these observations we take a closer look at the situation, a completely different picture emerges. A fundamental activity of the organisation is to train villagers in alternative methods of soil management. These techniques are taught at a training site in the village where the organisation has its base. The training site, as well as buildings raised during different phases of the programmes, is located on land that is controlled by the executive secretary. The organisation has, in communications with the financial partners, said that the land belongs to the organisation, but according to the traditional land tenure system, the land in question actually belongs to this individual. The control and use of it is assured through lines of inheritance and the historical presence of the family on the site. Such a control may actually be even stronger than an ownership contract, since the tenure system has both social and religious dimensions.

While training sessions in different agricultural techniques are conducted at the training site, actual cultivation is also undertaken. That means that people come from different villages in order to work on the very land of the executive secretary. He also later retains the harvest. During these as well as other "training sessions" arranged by the organisation, villagers are compensated financially.

In the Mossi tradition, collective work parties, "sosoagas", used to be organised in order to help the physically handicapped or people of high age to work their lands, so that even they could harvest. In recent times the practice of sosoaga has somewhat changed. Today it is mainly the better off people that ask other villagers to participate in a sosoaga. People come for a day's work in order to build relations and to be compensated with food and drink and possibly some money. This newer form of sosoaga is very practical for those controlling large areas of lands, but lacking control over sufficient labour within their family. Instead of paying wages, they get cheap labour through the use of a traditional system of collective work. The fact that the practice of sosoaga is upheld has to do with the mutual relationships that are created this way. The use of gifts and counter-gifts is widespread in the Mossi culture. If you accept a gift from someone, you also accept that you will help this person, should he or she be in need later on. Thus it may be a wise "investment" for a poor person to establish a relationship with someone better off through the sosoaga (Lédéa Ouédraogo, 1990, p 41f, fieldwork).

Here we may note interplay between the land tenure system and hierarchies of power. The strongman has been able to transform his control over lands into a scheme that channels large sums of money from outside donors into the villages.

This scheme has built and upholds his position of power. Without the flexibility of the customary tenure system it would not have been possible to implement this scheme. It was because of the flexibility of the tenure system that he could maintain the control of a piece of land that was said to belong to the organisation. He had lent the land to the organisation, but remained with the full right of reclaiming it, at any point in time. The organisation was, according to customary rules, also supposed to provide him with gifts for the use of the land. Hence, a stream of money was provided for. The position of the strongman was reinforced through this complex scheme.

Thus, it appears as if the strongman of the organisation - who obviously controls (relatively) enormous amounts of money through his central position in the organisation - actually calls for sosoagas on his own land. At the same time, from another perspective, the activities undertaken on his lands may be described as training sessions in soil management techniques undertaken by organisation A.

But how is it then that the villagers continue to come in order to work on the land of this strongman? Why do they not refuse? As we have already mentioned, the role of gifts and counter-gifts may be part of the answer. By working on the land, villagers establish connections to this man, who then is obliged to help them, either on a personal level, or through the other activities of the organisation.

Another part of the answer is to be found in the role played by the "zone representatives" of the organisation. This category, which from the western perspective is seen as a minor organisational anomaly, turns out to play a central role from the Burkinabé perspective. The zone representatives are people belonging to the traditional chief structure. They hold positions of power in their respective local communities, based on traditions and religious beliefs.

Information from key informants indicates that the executive secretary always sees to it that he upholds good relations to the zone representatives. They are all equipped with mopeds or motorcycles, which normally would not be the case for people in their positions, their source of income being agriculture. These zone representatives have no officially recognised salary or other compensation from the organisation. Nevertheless, they fulfil a task that one evaluation has described as being parallel to the work of the field workers (Réseau MARP, 2001).

What the zone representatives actually do is not identical to the formational sessions that field workers undertake in villages, but rather the propagation of the advantages and the work of the organisation. Through this, and through compensations of different kinds, they try to mobilise the population to take part in the activities of the organisation. Thus, the parallel is found in the go-between function that both the zone representatives and the field workers fulfil. Both categories act as channels for the diffusion of information from the executive secretary to the village groups and the other way around.

An important difference between the two categories is that the zone representatives through their standing as traditional leaders, chiefs ("naaba" in moré), have a much stronger social position than the field workers. It is normally seen as an offence not to follow the instructions of a "naaba". Their positions are reinforced through a complex web of cultural and social relations, and in this case also further

reinforced through the economic compensations that take place. The field workers have a position of strength vis-à-vis the villagers by commanding financial resources and knowledge. This is even more so for the zone representatives since they represent both a traditional power structure and the more direct links to the person who controls the money of the organisation, the executive secretary.

A further factor that makes villagers participate in formation sessions/sosoagas at the strongman's fields or in activities in their own villages is the economic compensation referred to. Participation in the reforestation programme and the anti-erosion programme is compensated by food rations. The food used for this compensation scheme comes from the World Food Program and has been distributed to the organisation during years of drought with the ambition that it should be used in food-for-work schemes. Since the food has been distributed to the organisation it is fully managed by it. In this case food distribution has been spread over several years and linked to the ongoing activities of the organisation (ACCES International, 2001a, pp 8f).

This organisational set-up builds up to a system that creates a platform, a stronghold for the leader of the organisation. It is however not the case that this platform should only be used purely for his personal enrichment. As in all patron-client systems, such personal enrichment is a vehicle that makes it possible for the patron to help the clients of the system in different ways. The legitimacy of the system thus stems from a complex web of cultural-religious beliefs and that the leader, the patron, continuously provides his subordinates with material benefits.

The leader for this organisation has managed to build his position without himself being a chief in the traditional system. He has rather managed to use the chiefs and the traditional system to act on his behalf. The key to this seems to have been his intelligent use of the financial resources provided by foreign NGOs. Another contributing factor is the complex web of social relations that he has built at all levels of society. By establishing himself as a social well-doer in a number of villages, he has managed to build relations with the political power structure, which works in a similar way to patrons gaining their positions through their mutual relationships with a network of key subordinates.

#### 5.3.4.2 Organisation B

Organisation B is different from A in many respects. It was founded in 1989 and received official recognition as an association of village groups some years later. Its field of operations covers seven provinces, and it has been working with village groups from 25 of the 150 villages in this area. It is an organisation that is related to a church, since it was founded by a group of Christians and led by a president who is also a pastor in the local church. The name of the organisation makes reference to Christian beliefs, and also its bylaws, even though at the same time it states that it is not a confessional organisation.

This organisation is not as well structured as organisation A. According to its bylaws, it is governed by a general assembly. But it is not possible to establish how many village groups hold the right to be represented in the general assembly. These assemblies are supposed to be held four times a year, but due to a lack of

documentation it has not been possible to establish how many assemblies have actually taken place. The last one seems to have taken place in May 1999.

The organisation also has a governing board, which was elected at a general assembly in 1992. This board consisted at that time of eight persons. But with the argument that board members come not to serve the organisation, but rather to get economic compensation for their engagement, the president has during the last few years dismissed the majority of the board members. Today the governing board is reduced to the pastor and his wife, who formally holds a position as assistant general secretary of the organisation. No re-elections have taken place since 1992 (Paré, 2001, p 19-22).

Under the governing board there exists a permanent executive secretariat. In this secretariat two other persons support the pastor and his wife. This set-up was decided at the general assembly in May 1999. The two additional persons are supposed to serve as field personnel, and one of them has recently been sent to a fieldwork training course. According to the evaluation, his abilities to undertake fieldwork remain very limited.

According to the bylaws of the organisation there are also supposed to be departmental coordinating bodies with three members each. Village groups are supposed to constitute the basic level of the association. However, the coordinating bodies do not exist and the village groups do not consider themselves as members of the organisation. The pastor, as an individual with good connections to sources of funding, is however well known among the villagers (Ibid, p 22).

The organisation has in spite of these weaknesses managed to establish relations with an international NGO. The cooperation has not been formalised in a programme, but over the years the international NGO has supported a number of activities such as the construction of schools and wells, and the distribution of food aid during the 1998/99 cultivation season, which was a season of harvest failure due to drought. These activities have been undertaken rigorously with good control over expenses incurred, and with the participation of villagers in part of the construction work.

As was the case with organisation A, some of the buildings constructed have been raised on the very land that belongs to the president. During the distribution of food aid, a seeds store was constructed in order to save food and seedlings for subsequent seasons, with the intention of enhancing food security. This store is also erected on the land of the president. It is at the same time the president who controls the funds that were raised through the sale of food aid. This food was bought locally and resold at a "social" price, which is below the ordinary market price. This mechanism was developed in order to minimise the negative impact of food aid distribution on local food markets. But the result was that a fund was created which amounted to a percentage of the total sales value of the food aid donation. This fund was supposed to be used if food shortages should occur again.

Through these projects and interventions the president has been able to create a good standing for himself in the area. During the whole life of the organisation, the president has been careful to cultivate an image as a pastor who brings goods to the villages. This he may do through his good connections to foreign "friends". The

organisation has thus been presented as the work of individuals rather than as a collective undertaking. An evaluation has established that the knowledge about the existence of the organisation is very weak among the villagers who have benefited from its interventions. It is rather the pastor as such who is seen as the benefactor (Ibid).

Organisation B differs from A by not having a formal structure that is acceptable to foreign NGOs. Its recourse to external funds depends on the ability of the pastor to convince the donor about the needs of the villages, and his careful handling of the finances. Furthermore, while organisation A has worked with extensive programmes, and built up an executive structure with field workers and administrative staff, organisation B has remained a matter for the pastor and his wife, with some other people contributing on an irregular basis.

#### 5.3.4.3 Peasant Organisations from the Mossi Perspective

In spite of these obvious and large differences we may note a number of similarities between the two organisations. Charismatic leaders who wanted to reinforce their standing in the local community have initiated both organisations. This process has been undertaken through the creation of a complex web of social relations in which traditions and religious beliefs have been utilised. Local participation in activities (which is necessary to obtain foreign funding) has been assured through a combination of material compensations and social pressure. The utilisation of the system of creating bonds of mutual benefits, a system that is widespread in the Mossi society, has in both cases largely contributed to the building of these platforms for the leaders.

An essential feature of an organisation, according to the Mossi perception, is that the founder/leader has a good ability to negotiate financial support from external actors. It is through the channelling of such resources that relationships, which we may regard as constituting an organisation, are built up. The "organisation" is thus a platform for an individual, a charismatic leader, who is able to secure a flow of resources for his clients. This mutual dependency is the essence of the organisation, and it is the continuous flow of material resources that ensures the existence of the platform.

Information from key informants and from observation of other Mossi peasant organisations indicates the existence of cases more obvious than these two described here. Examples exist of organisations that have been destroyed by their leaders, rather than reformed, when put under pressure from external donors.

What conclusions could we draw concerning power relations prevailing in Mossi villages? Our starting point for the study of organizations is that they form part of the local society in which they function. Hence, it is possible for us to draw some conclusions about the wider society through the study of organizations. First, we have seen in these two organisations a clear interplay between custom and power relations. The land tenure system, *sosoagas*, as well as the idea that strong people are supposed to provide for their relatives and inferiors are used by strongmen in order for them to arrange a position of power for themselves. There is flexibility in the practical application of such customary systems, and this flexibility is often

used to promote interpretations that support the position of strongmen. That land could be said to belong to an organisation, but at the same time be controlled by an individual is one case in point. That a *sosoaga* may be arranged, and at the same time be described as a training workshop, is another example of how this flexibility is used.

The building up of formally democratic structures, accepted by western partners, but which in reality are constructed to secure full control for the strongman, is another important aspect. This shows that norms are being internalised and that they override formal structures. There are formal possibilities for members in the organizations to vote for others, to control the functioning of the organization. But these possibilities are rarely used. There is an informal agenda that overrides all this. "People know very well for whom they ought to vote", as one informant puts it. In the organizations the strongmen are obeyed and are allowed to maintain positions of power. But there is also some accountability exercised. The role of the leaders is to provide their clients with financial resources and to solve problems for them. "Sometimes it gets impossible to sleep, even. People come to me late at night and early, early in the morning in order to ask for money or help in other form", as one organization leader puts it. He tries to move around without informing people where he is in order to have more space for himself.

Moving from the discussion about organizations to the village level, we may see that the role of the strongman in the organization is paralleled by the role of the chief in the village. The chief does not control as much money as an organizational leader. But he has the authority to make the most important decisions in the village: resolving conflicts, having a say in land issues (how much depends on the role of the land chief in that particular locality), and making decisions about production practices. In that sense, villagers have an interest in maintaining good relations to the village chief. At the same time, the chief ought to make wise decisions in order to keep his legitimacy. Hence, there is a dual relationship.

When it comes to more direct relations of power, the village chief holds a position where he may command people to work for common purposes or for his own personal interests. Historically, it used to be a very strict power structure, where the chief could order villagers to walk hundreds of kilometres, at danger of their own lives, in order to deliver gifts to the *mooro naaba*, the highest chief, in Ouagadougou. But even today, chiefs have been accused of ordering the killing of disobedient people. There is an ongoing debate about whether chiefs in reality stand above the law. The starting point of that debate was a murder case in the town of Tenkodogo in 2001, where the murder was committed in the courtyard of the house of the chief (l'Observateur, 2001). Another aspect of the issue is the informal, but extensive influence that chiefs have on the national political scene. There is a parallel structure of governance, with traditional ministers for different areas, which has an informal influence over the official political system. It is also the case that some chiefs engage themselves in official politics.

Cases such as suspected murder are extreme, and the power of village chiefs may differ widely between villages. But a more common pattern is that chiefs may control the voting behaviour in official elections in their villages. An agreement between a politician and the village chief is often sufficient to secure the majority

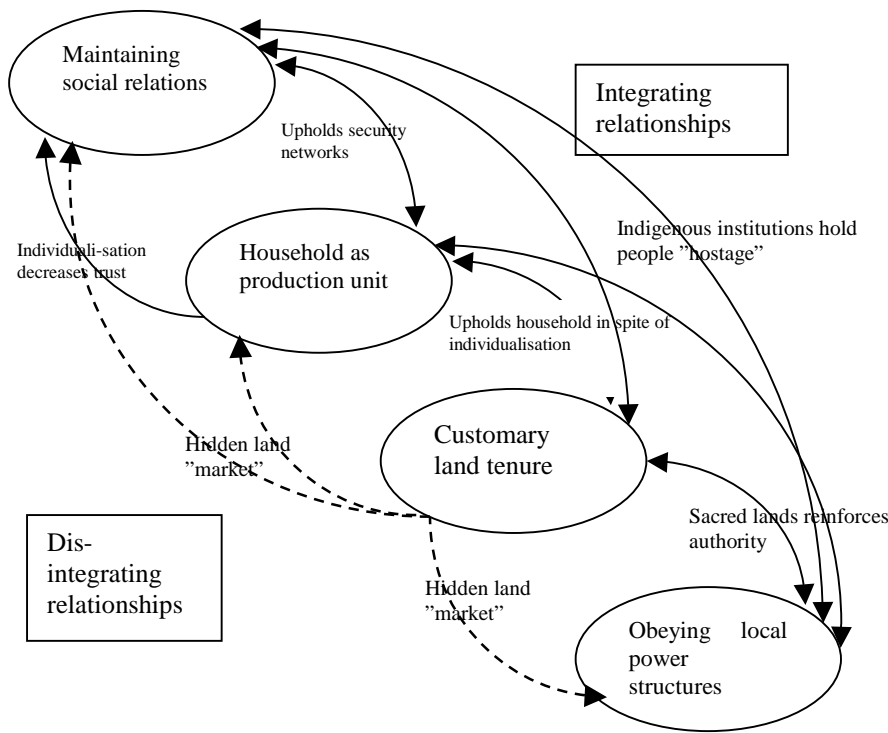
of votes in that particular village. The prevailing respect for the chiefs is observable in everyday life situations, such as the way people greet the chief (always from a physical position below the chief), the bringing of gifts to the chief and the practice of using “naaba” (chief in mooré) and not the given name.

Furthermore, we note that power relations are internalised to a great extent. The traditional chief structure is still very influential. It could be seen as the “habitus” of people in this setting to respect and obey chiefs and other persons of authority.

### 5.4 To Explain Income Diversification

We have discussed four different institutions that in various ways act as hindrances to more dynamic economic strategies and diversification of income sources: relationship building, household structures, relationship to land and power hierarchies. These four institutions are also connected to each other through a fairly complex web of interactions. This is illustrated in the following diagram. Arrows represent causal relationships.

**Diagram 5.1:** Institutional Web in The Mossi Peasant Society



This network of causal relationships represents more than the individual parts that go into it. It may be seen as well as an argument about the causal relationship between low reluctance to change and income diversification. The establishment of these four institutions and their interrelations are a form of process tracing. These

institutions are factors that are behind, or are at a more disaggregated level than, the causal relationship between reluctance to change and income diversification. In that sense, a web of causal mechanisms has been established. Because people are bound by the way land is treated they must uphold the traditional way households are structured. These household structures also sustain hierarchical power relations. And both hierarchical power relations and traditional household structures have an influence on the way relations are formed and on forms and levels of trust that prevail in the society. The upholding of a multitude of relations is furthermore a factor that binds this societal web together.

This tightly knit web of institutions and norms creates among people a high reluctance to change. To break out of this web would take too great an effort, and may not even be worthwhile. The way these institutions function implies that diversification is foregone. The forms by which land is accessed, adherence to power structures, and the upholding of social relations force peasants to concentrate on their core activities: cultivation and cattle breeding. There are factors that to some extent contribute to the breakdown of this web. Access to markets was found to be a factor that contributes to increased income diversification in the form of basket weaving in Zaare, Ghana. It was also found to have an effect on vegetable gardening as seen in the comparison between Korsimoro and Loumbila. Increased individualisation follows from such increased market access. These relationships are described as disintegrating relationships in the model. However, the integrating relationships are so far stronger, which explains why the web is held together in spite of these disintegrating forces.

This discussion has also provided an argument about time asymmetry: the reluctance to change has through these norms a long history, that constituted basic conditions long before people took their decisions about allocating productive resources.

Hence, it may be stated that the explanation is supported by arguments about time asymmetry and about a causal mechanism. Earlier, arguments about the isolation of reluctance to change as a causal factor have been developed through the use of Boolean algebra, and through interviewing a relatively large number of households. These households were situated in a limited number of villages, and hence were not randomly chosen. Yet, there is enough variation between these sample villages, and between households in these sample villages in order to conclude that the other factors in the truth table do not affect the prevalence of income diversification.

The independent variables (land, labour, inputs, credits, reluctance to change, social capital) have been chosen on the basis of literature studies. We have in this way used the work of others in order to identify the relevant independent variables to study. The basis for our argument about the isolation of reluctance to change is accordingly quite large, which strengthens our findings.

The argument about isolation has also been dealt with through the inclusion of control villages. These have been selected on the basis of interviews with key informants, and first and foremost on the basis of what statistics and the



quantitative studies of others show about the level of income diversification in different areas.

The argument about the counterfactual situation has been developed by the inclusion of both diversifying and non-diversifying households in the respective village samples.

With arguments about these four points, I have constructed an explanation of why smallholders on the Mossi Plateau diversify their income sources to a lesser extent than smallholders in other regions of Burkina Faso, or in the Northern parts of Ghana. I have also found a pattern that gives important insights into why households differ in their respective levels of economic dynamism. This pattern is valid for the Mossi society in Burkina Faso. But my findings may have a greater scope for generalizations. The fact that prevailing norms and institutions hold back income diversification and hinder what in the special setting would be seen as rational economic strategies, means that such analyses may also be undertaken in other countries, in other economies. Different factors, and different norms would most certainly be found in other settings. But it is possible to generalise the fact that economies need to be understood and analysed in their societal setting. This has enormously important implications for possibilities of applying standardised economic reforms, or development interventions. Without an enhanced understanding of local economic behaviour, reforms or other interventions will take a very long time to materialise, since the condition for success is a change in institutional practice, which takes a long time to mature.

Having explained the practice of income diversification on the Mossi Plateau, I will in the following chapters discuss the issue of economic dynamism. This issue has appeared in the background throughout our discussion, but it will now be given more attention.



## 6. The Dynamic Areas

### 6.1 Diversification and Economic Dynamism

In chapters 4 and 5, the discussion on income diversification has focussed on the roles and characters of indigenous institutions. This has provided an explanation of income diversification. Now, to what extent may various institutions prevailing on the Mossi Plateau in central Burkina Faso be described and analysed in relation to economic dynamism? What I have called economic dynamism at the household level is what at the aggregate level would translate into growth of the agricultural sector or possibly the rural economy.

This issue has appeared throughout the discussion, but it has so far not been given any prominent role. The truth tables presented in chapter 4 showed that economic dynamism did not follow the same pattern as income diversification. It could not be explained in the same way, since in total seven out of 15 cases of economic dynamism in the Burkinabé villages occurred in spite of a high reluctance to change. In the case of Zaare, northern Ghana we found that economic dynamism and the lack of it was explained by the low or absent reluctance to change. But in the Burkinabé villages it was more difficult to see any pattern. If we extract the cases of both economic dynamism and income diversification from the truth tables presented earlier, we end up with the following:

**Table 6.1:** Extracts from Gandaogo

wLICsR	0/+
wLIcsR	0/+
wLicSr	1/+
wLiCSR	1/-
wLicSR	0/+, 1/-
WLICSR	2(0/+)
WLicSR	0/+

**Table 6.2:** Extracts from Zambanga

wLICsR	0/+
wlicSr	0/+
wLiCSR	1/+
WIICSR	1/+
WLicSR	1/-

**Table 6.3:** Extracts from Rapougouna

wlicSr	3(1/-)
wLIcsr	1/-
wLicSr	1/+, 2(1/-), 0/-
WLicSr	2(1/-)
WLicSR	1/-
WLicSR	2(1/-)

**Table 6.4:** Extracts from Bango

WLICsr	1/+
WLicsr	1/+
WLicSR	0/+

If we analyse the villages one by one, we see that there is no clear pattern in Gandaogo and Zambanga. Economic dynamism is not related to income diversification, and a low reluctance to change may not explain why household in these villages are economically dynamic. Economic dynamism in these villages obviously has to be explained by some other factor than the ones tested here. In Gandaogo, availability of land might be a necessary, but not sufficient factor (many households who have enough land are not economically dynamic). Land together

with social capital is also a plausible combination, but that turns out to hold up even less well than the factor availability of land alone. Hence, the conclusion has to be that the factors we have tested do not produce any convincing correlations. The same conclusion must be drawn regarding Zambanga.

However, the villages of Yatenga (Bango and Rapougouna) show a more regular pattern. The few cases of economic dynamism appearing there are correlated both with a low reluctance to change (a necessary, but not sufficient condition), and with income diversification. As seen in Rapougouna, however, most cases of income diversification are not correlated with economic dynamism. In a case like this it might be that when hindrances for economic expansion are important enough, only defensive strategies are possible. If soil degradation, irregularities of rains and animal destruction of crops become too frequent, diversification may be needed in order to maintain the status quo, rather than to expand family economies.

The conclusion is that it is possible to be economically dynamic on the Mossi Plateau, without diversifying income sources away from on-farm production, and without having a low reluctance to change. There must be other ways of accumulating assets in this area. In the Yatenga province, however, it is necessary to rather think in new terms and to diversify income sources in order to keep up an economic dynamism.

As seen already in chapter 4, economic dynamism in Zaare in northern Ghana was neatly explained by a low reluctance to change in that village. In that sense Zaare equals both the Yatenga villages. To be economically dynamic there implies having to think in new perspectives, and to diversify income sources. This means that a question remains about the villages on the Mossi Plateau: How is it that it does not take a low reluctance to change, and income diversification there in order to become economically dynamic? In order to answer such questions there is a need to study what possibilities exist for economic dynamism in the respective villages. Could it be that peasants in Gandaogo have access to some economic activity that is part of their traditional farming system, but at the same time is very profitable - whereas peasants in other villages need to seek non-traditional activities in order to become economically dynamic?

It appears that both of the villages studied on the Mossi Plateau have a special focus on activities that are especially expansive. Gandaogo emphasises the cultivation of cotton, whereas Zambanga has a focus on cattle breeding. Both these activities form part of traditional on-farm activities and are hence not covered by our studies of income diversification. In order to cover a third very dynamic area within the current Burkinabé agricultural sector, the growing of vegetables, I have also analysed the villages of Korsimoro and Loumbila. In these villages large dams make dry season cultivation of vegetables an important economic activity. I will in the following describe what possibilities these three economic activities offer on a national level, as well as on the Mossi Plateau. By doing this I will explore the possibilities of growth in Burkinabé peasant agriculture, and also be able to better understand the potential for peasants to generate dynamic income diversification into these activities that all serve as complements to the growing of cereals and other food crops.

## 6.2 Cotton Cultivation

Cotton has for more than a century been of great importance to the Burkinabé economy and society. In pre-colonial times cotton served different roles. It was used for the making of clothes for daily use. Cotton cloths were also used ritually, in connection with funerals. On top of this, woven cotton bands were used as a means of payment in exchange for salt or cola nuts obtained in long distance trade. In those days, cotton had a secondary role in the cultivation, and it did not demand much extra work. It was planted on distant fields in the shade of trees, and the yields reached on average between 50 and 150 kg/hectare (Schwartz, 1993, p 2).

The spinning of cotton was a female task, while weaving was the responsibility of men, and often men belonging to the local noblesse: blacksmiths or griots.

When France colonised the Upper Volta, in 1895, it was from the outset very interested in the cultivation of cotton. In 1902, American traders speculated with the American cotton harvest of that season in a way that had serious repercussions on the European textile industry. The uncertainties in cotton deliveries emerged clearly, and the next year a special agency was created with the aim of promoting cotton production in French colonies, l'Association Cotonnière Coloniale, ACC.

The activities of ACC did not, however, directly affect Upper Volta before it was declared a distinct colony in 1919. The first governor of the colony, Frédéric-Charles Hesling, developed a program for the promotion of cotton cultivation. Part of this was the setting up of a local textile service, which was given the tasks of increasing rain-fed cotton cultivation and making of technical improvements of the product. Hesling ensured that cotton cultivation became mandatory for the villagers. Every village was to cultivate 4 hectares per 100 inhabitants (Ibid, p 3f)

At first, this resulted in increased harvests, but these quickly declined to initial levels, and the policies of Hesling failed. In 1932 the colonial administration declared Upper Volta economically non-viable, and the territory was again integrated into other, neighbouring, colonies. Cotton was no longer found on the list of commodities traded from Upper Volta.

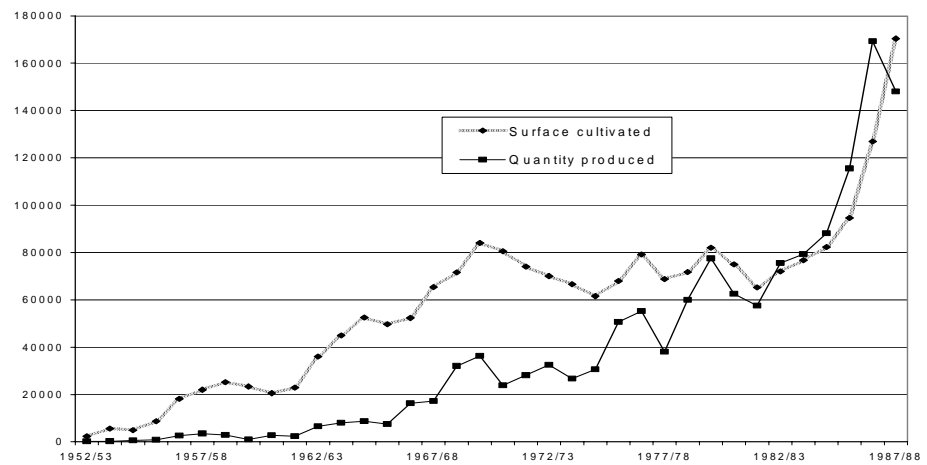
When the Upper Volta colony was reconstituted with its old borders in 1947 a new discussion about the economic development of the territory was initiated. In 1951, the Compagnie Française pour le Développement des Fibres Textiles, CFDT, was given the task to promote the cultivation of...cotton! In a first period these efforts covered the whole country with the exception of some remote areas in the southwest, the east and the northeast. Peasants were trained and marketing facilities were created for trade at local and international levels. Technical development of products was also provided. An important difference was that new varieties of cotton with longer fibres than the traditional varieties were introduced. These were better suited for ginning. This opened up possibilities for international trade (World Bank, 1988, p 2). In the 1960s, the areas of intervention became more concentrated, first to the central parts of the country, later with a gradually more westward oriented focus.

In the early 1970s, yet another cotton promotion programme was launched in the western parts of the country, funded by the World Bank. Technical assistance was

still obtained from the French association for cotton promotion (CFDT). In 1979 the CFDT and the government became the owners of the newly created SOFITEX. The government owned 65 per cent and CFDT 34 per cent of this textile fibre company.

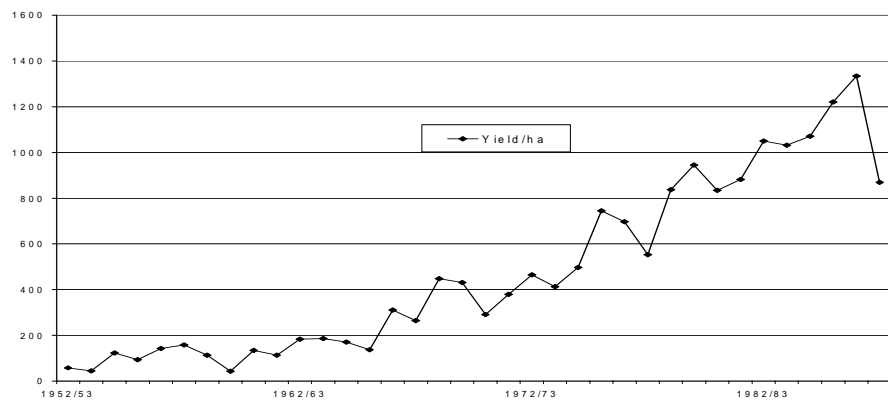
During the years after the Second World War, and during the post-colonial period, the areas of cotton cultivation have shifted. Earlier the central parts of the country, the area around Kaya, were the heartland of cotton cultivation, nowadays the south-western provinces dominate.

**Graph 6.1:** Total Cotton Production in Burkina Faso (tons; hectares)



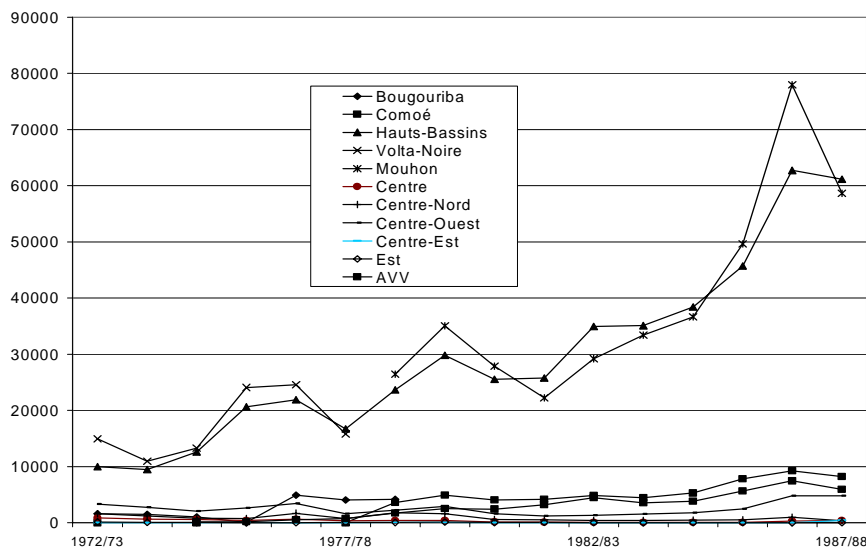
Source: SOFITEX, 1989, Annex A.

**Graph 6.2:** Cotton Yield per Hectare (kgs)



Source: SOFITEX, 1989, Annex A.

**Graph 6.3:** Cotton Production in Different Regions of Burkina Faso (tons)



Source: *SOFITEX, 1989, p 32 and SOFITEX, 1982, p 33.*

As we can see in the table describing cultivation per region, the Volta-Noire, which later was redefined as Mouhon, and the Hauts-Bassins have come to dominate the cotton production. 95 per cent of the cotton cultivation is concentrated to the Mouhoun and High Basin regions in the southwest. The remaining production is spread out over the southern and eastern provinces. The period described in table 1 is the period since the World Bank financed cotton promotion programme got started. This programme had its focus on these western and south-western regions of the country. We may also in the table note increases, albeit at a much lower level, of production in other south-western and western regions, such as the Comoé, Centre-Ouest and the AVV. In the central parts of the country production has stagnated or fallen back during this period.

The prime reason why the production has been moving from the northern part of the central area towards the south and south-western parts of the country is the degradation of the environment. Lands are becoming less fertile, due to increasing population pressure, increasing stocks of cattle and possibly also due to the widespread cultivation of cotton.

The statistics show that cotton production has steadily increased since the launching of the promotion programme in the early 1970s. In the 1990s, the promotional efforts have intensified. The Burkinabé government has re-launched its efforts at increasing the cultivation of cotton. The reason is that cotton is the prime agricultural export product, and the government wants to strengthen this export further. Through a contract with and regulation of SOFITEX it offers credits, distribution of inputs of different sorts, technical advice and also marketing channels to the producers. A fund has also been established with the purpose of

guaranteeing stable prices to the cotton producers. The provinces involved in this system are selected on the basis of agro-ecological factors.

SOFITEX was, as we have seen, originally a fully state-owned company, but through conditions put up by the World Bank, part of its capital was sold to the cotton producers. This privatisation followed a certain resistance from Burkinabé authorities, which argued for a limited privatisation and managed to restrict the sale to 30 per cent of the capital of the company. Anyhow, the cotton producers now have an influence over the development and execution of the company's strategies (Government of Burkina Faso, 2001, p 17).

Currently, cotton cultivators are offered credits by SOFITEX in collaboration with the national agricultural credit bank, CNCA, for the purchase of inputs – fertilizer, pesticides and herbicides. It is also possible to obtain short-term loans for the immediate pre-harvest period, or 5-year loans aimed at introducing ox-ploughs. Repayments of the input and short-term credits are made by deductions from the price the producer is paid upon harvest. Credits are offered in the form of group based lending. The groups are responsible for their internal distribution of credits, debts and profits. There is also technical support offered to cultivators through SOFITEX extension workers. These are also supported by the governmental research institute, INERA (Schwartz, 1993, p 6, fieldwork). SOFITEX is gradually retracting from offering credits. This role is being handed over to CNCA, which at the same time is building up securities in order to be able to handle these credits (Government of Burkina Faso, 2001, p 17).

Contrary to other crops, cotton has been systematically promoted by the government. The government has come with an initiative, an important input from outside that peasants have responded to. According to an evaluation undertaken by the OED of the World Bank, the cotton promotion projects in West Africa have been striking successes compared with other agricultural development projects in Sub-Saharan Africa (World Bank, 1988, p 29). This, they argue, is because of a number of reasons. At macro-economy level there have been good policies in terms of; (i) availability of foreign currency to import agricultural inputs, (ii) availability of imported consumer goods, (iii) no major over-valuation of the currency and (iv) free mobility of labour (Ibid, p 13). Farmers themselves explain the success in the following terms; (i) the existence of an economic activity that generates sufficient income to form the basis for group activities, (ii) the fact that services provided accord with those the farmers themselves prioritise, (iii) the fact that elected leaders for cotton groups have not been the traditional village chiefs (Ibid, p x). Another explanation provided by farmers is the stability of the cotton price offered to them. A stable and secure price is more important than a higher price (Ibid p 20).

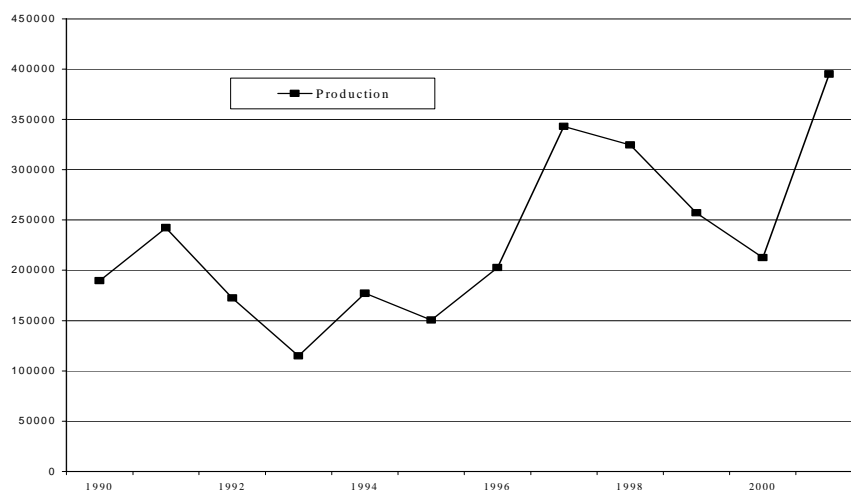
The drawbacks of the project are, according to the OED evaluation, its rigidity, the failure of price stabilization mechanisms built up to guarantee stable prices, and too heavy involvement of the state in terms of subsidy provision. In years of bad cotton harvests, the system may not be sustained without a heavy drain on the government's finances, making the whole system fragile in the long run. Seen from another angle, one might say that farmers are over-protected by too large state subsidies (Ibid, p 29).



During the period 1970 up to the early 2000s the total production increased from 23 000 tons to 395 000 tons. This happened through a 440 per cent increase of the area cultivated (from 80 000 ha to 349 000 ha) but mainly through an intensification of production (from 291 kg/ha to 1143 kg/hectare). When the world market price for cotton fell during the period 1990 to 1993, the Burkinabé production went down to 115 000 tons. In early 1994 the CFA franc was devalued by 50 per cent against the French franc, and cotton production was possibly the sector that reacted most positively to this. Production increased again to 343 000 tons in the peak year 1997. During this expansion, the area cultivated was the most important factor, while the overall yields per hectare fell somewhat. The number of cotton cultivators were about 130 000 in 1997.

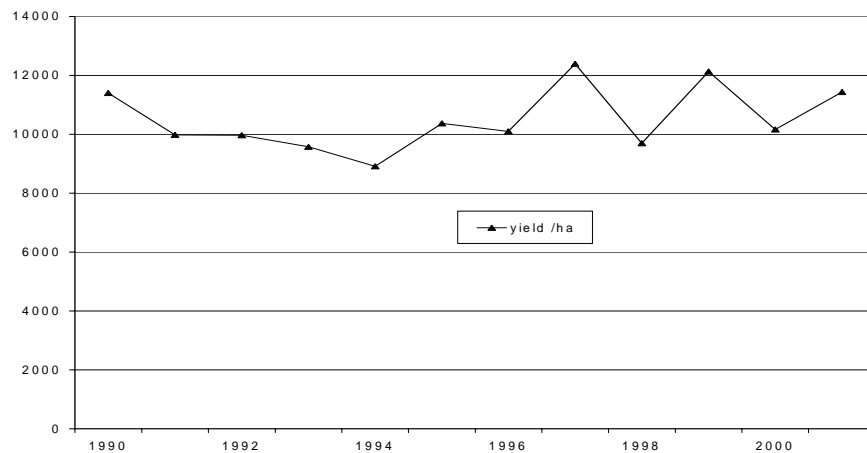
In 1999/2000 the total production declined to 257 000 tons, and in 2000/2001 it is estimated at 217 000 tons, a reduction of 15 per cent compared to the previous year.

**Graph 6.4:** Cotton Yield per Hectare in Burkina Faso During The 1990s



Source: <http://apps1.fao.org/>.

**Graph 6.5:** Cotton Production in Burkina Faso During The 1990s (tons)



Source: <http://apps1.fao.org/>.

Highly interesting are results from a study undertaken by Schwartz about the adoption of cotton cultivation by different ethnic groups in the western parts of Burkina Faso. He shows that the adoption rate of cotton cultivation varies between 92.4 per cent (the Kô) and 10 per cent (the Samogo). The medium adoption rate is 56.9 per cent. Schwartz shows a difference between groups with an origin in the area, and immigrants. Primarily because of difficulties in obtaining enough land and land of good quality, the immigrants are practising cotton cultivation to a lesser degree than the original inhabitants. But this does not, however, explain the differences between the different ethnic groups. Many of the groups that have the lowest adoption rates are originally from the area (Schwartz, 1993, p 12-20, table 1).

Among the groups with the highest adoption rate are the Bwa (75 per cent) and the Sénoufo (87 per cent). Both these groups adopted cotton cultivation at an early stage. Both groups have a reputation as being especially good farmers. Furthermore, what is particular with these groups is that maize is their staple food crop, and that they noticed early that the rotation of maize and cotton is favourable for soil fertility. If one applies the fertilizers that cotton demands, that may be obtained on credit through the CNCA, good effects are seen on maize grown on the cotton fields the following year.

Among the intermediary adopters Schwartz studied the Marka. This group of traders have furthermore specialised in cotton weaving and dyeing. They have a history of selling cotton products to the Bwa in particular, and these economic bonds still remain. Schwartz himself is a bit surprised by the relatively low adoption rate of cotton cultivation among the Marka (46,4 per cent), but interprets this as stemming from the historic partition of tasks between the Bwa and the Marka. The Bwa have been cultivating cotton and the Marka have been processing and refining it into traded products.

Groups with very low adoption rates are the Nounouma (17,8 per cent) and the Lobi (non-quantified, but very low adoption rate). Their low adoption rate is

somewhat of a mystery, since they both have access to land, and have excellent agro-ecological conditions for cultivating the cotton. Schwartz provides a plausible explanation for the Nounoumas based on their strong focus on the production of cereals and on food security. They are known as excellent farmers, who first and foremost cultivate millet and sorghum. They store this food in high clay-containers of a very special design. Storage may last up till nine years. Much attention is paid to the upkeep of these food stocks, and a general comment is that “it is very difficult to cultivate millet and cotton at the same time”. Traditionally, cotton has been cultivated by older people on small plots on the outskirts of the villages, a practice that has continued. In summary, the low adoption rate among the Nounoumas has, according to Schwartz, to do with their relationship with land, and their focus on securing their food reserves.

The anthropologist Madeleine Père has studied the Lobi people in the southern part of Burkina Faso (1988). Furthermore, their reluctance to adopt cotton cultivation was also the subject of a special study commissioned by the World Bank in the mid-1970s. This was part of a feasibility study for the second phase of the cotton promotion programme (Paré, 2002, personal communication). Their province, Poni, has particularly good conditions for cotton cultivation, yet very low quantities are produced here. The Lobi are generally known among fellow Burkinabé to be very conservative, and reluctant to give up their own culture and adopt foreign practices. According to Père who has studied the Lobi for some twenty years, this reluctance has its roots in early colonialism. Due to a high rate of violence during the first days of colonialism, the Lobi elders established a secret code according to which the Lobi would turn their back on all external influences originating from white people in particular. Accordingly they refused to pay taxes, to send their children to school, to participate in forced labour as well as to introduce new crop varieties (Schwartz, 1993, p 16). Lately, this reluctance towards outside influence has gradually diminished.

Hence, Schwartz has shown considerable differences concerning the adoption rate of cotton cultivation between ethnic groups. Their magnitude cannot be explained by differences in capabilities and/or opportunities facing the different groups. Any explanation needs instead to be sought in factors that relate to group identity. Schwartz has provided such explanations for ethnic groups that he studied. In that way, he has shown that even when economic opportunities are ample, questions of group identity are fundamental and they override other incentives. This is shown by the fact that relatively even promotion across ethnic groups leads to very different adoption rates. This is the case even with cotton, which according to many calculations throughout the years, has the greatest economic potential of all crops in Burkina Faso, and provides producers with considerably higher incomes than those of the non-growers (World Bank, 1988, p iix).

### *6.2.1 Cotton Cultivation on the Mossi Plateau*

We will now turn to the discussion on cotton adoption on the Mossi Plateau, and in particular in our study village Gandaogo in the province Ganzorgho. Historically a few peasants in this village have grown cotton for many years. But lately, with the new facilities offered by SOFITEX, a large number of households in the village

have started to grow cotton. This expansion clearly emerges from the production statistics of the last few seasons.

The peasants cultivate on an individual basis. All arrangements, however, concerning credits, measuring and distribution are undertaken by associations, in which all the growers are members. The leadership of the association keeps track of how much members borrow from SOFITEX in order to buy inputs and seeds. When the harvest is gathered it is also noted how much each has produced. When the money arrives from SOFITEX, the leadership distributes the profits to each and every one. In the season 2000/2001 seven associations were active in Gandaogo, with a membership of 20 to 45 members.

The sale statistics of these associations show that the number of cotton growers has increased by about 20 per cent during the period 1998-2001. The annual production per grower has remained around 500 kg during the period, but given the increase of growers, the total village production has increased. However, some saturation of demand may be traced by the fact that the profit per grower has declined considerably as the number of growers, and the supply, have increased. The share of growers who have recorded a net loss has been around 10 to 15 per cent. Almost all of the loss makers have given up cotton growing.

During the season 2001/02 additional negative trends have appeared. A slight decrease in the number of cotton growers has taken place, and both the total as well as the per capita quantity have decreased substantially. The share of growers running a loss has increased to 19 per cent, one out of five growers.

Another interesting feature is that only slightly more than half of the cotton growers have managed to increase their harvests from one year to another. From the season 1998/99 to 1999/00, 38 of the 98 growers managed to increase the crop harvested, whereas 34 growers got a similar or smaller harvest. 26 of the growers in the first season did not appear in the statistics of the latter season. From the 1999/00 season to 2000/01, 44 growers out of 100 managed to get a larger harvest, whereas 42 growers got similar or smaller harvests in the latter season. 14 of the 1999/00 growers did not appear in the 2000/01 statistics. This is probably because they quit cotton growing, or left for some other group, which we may not have been able to trace.

Moving from 2000/01 to 2001/02, we note further changes. Only 28 out of 121 growers managed to increase their harvests this period, whereas 61 stayed with similar, or smaller harvests. 21 growers disappeared from the statistics between these years, possibly indicating that they stopped growing cotton.

The inflow of new growers has been sufficiently large to outnumber the exit of growers. We should not draw firm conclusions from the fact that many growers' names disappear from the books, since it is possible that one household may be represented by different names from one year to another. Since we have only studied the books of the groups, we may not exclude this possibility.

**Table 6.5:** Development of Cotton Growing in Gandaogo

Season	No of growers	Total production (kg)	Qty/ grower (kg)	Total profits (FCFA)	Profit/ grower (FCFA)	Making losses (%)
1998/99	98	48 605	496	5 525 453	56 382	8,2
1999/00	100	48 697	487	5 514 573	55 146	16
2000/01	121	61 935	512	5 057 065	41 794	14
2001/02	114	50 587	444	4 890 862	42 902	19

Source: fieldwork.

We note that when opportunities emerge, in the form of availability of inputs and credits and marketing possibilities, a great number of peasants respond in a positive way. It is probably the possibility of earning money that attracts many to the growing of cotton. This motivation - to earn money and to get rich - is what peasants almost exclusively state when they are asked why they start or continue growing cotton in spite of the risk of becoming indebted.

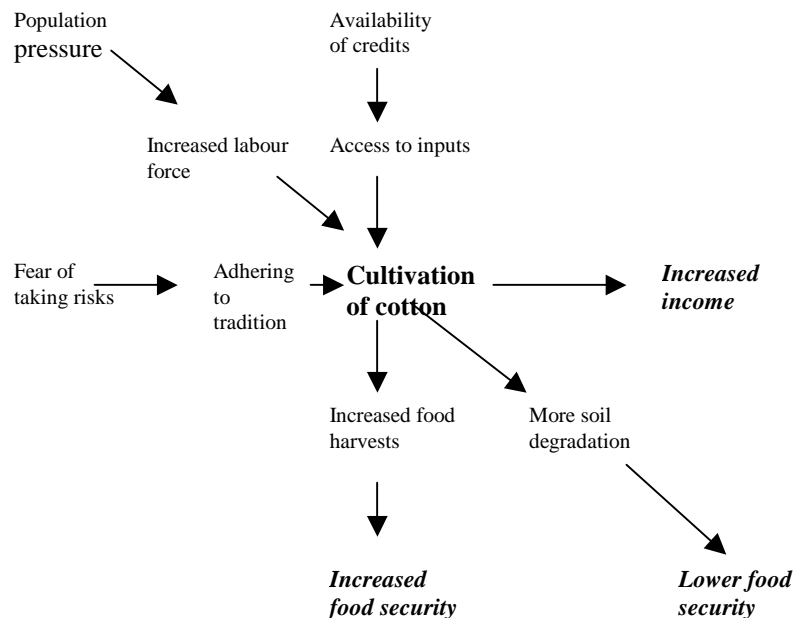
However, another reason why so many take on cotton cultivation is that it opens up access to credits and inputs. If they grow cotton on one field, they may grow food crops on it the next season and thereby obtain larger harvests of food crops, and greater food security.

There is, as well, a darker side to the story. It is well known among the peasants of Gandaogo that cotton may reduce soil fertility. Stories are many about the fate of cotton growers in a neighbouring village, Moaga, where cotton cultivation has resulted in land degradation and great difficulties. Farmers in that village have abandoned cotton. There are altogether other reasons for the decreasing soil fertility as well, but the cotton growing may contribute and intensify the process. What is emerging is acidification of soils that most often is due to a continuous reduction in organic content. When the share of organic content in the soil falls under about 0,6 per cent, soil acidity increases, and the soil response to mineral fertilizer decreases considerably. The only solution is to replenish the soil with organic matter. Since acidification is a long-term process, but where the indications and the consequences appear at a late stage, farmers often do not react before the soil fertility is already damaged (World Bank, 1988, p 40).

Why are peasants in Gandaogo then taking on the cultivation of cotton to an increasing extent? Are they, as we have argued earlier, guided by their cultural identity in making such economic decisions? Or are they, by increasingly turning to cotton cultivation, trying to overcome entry barriers in the form of access to credits, to inputs and to markets? It might be that the scheme offered by SOFITEX makes it possible for peasants to simultaneously overcome a number of entry barriers. Overcoming one of them might not be a sufficient incentive for starting to cultivate cotton.

The answer is complex and may be analysed by using the following chart, containing different chains of causation, producing different outcomes:

**Diagram 6.1:** Causes of Cotton Cultivation



If we take a closer look at the chains of causation described above, we find that all of them are complex and in a sense indirect. For example the availability of credits through SOFITEX ends up with better food security, because farmers rotate cotton and food cultivation. In that way they obtain better harvests. Hence, the increased food security is an indirect effect, which of course could have been obtained, had the farmers had access to credits without the cultivation of cotton.

But even if food security increases when mineral fertilizers are used, soils may degrade anyhow in the long run. The chain starting with increased population pressure has the effect that more labour power become available. Larger fields may be cultivated, and it is possible to add cotton as a cash crop. But the population pressure as such, through the increased use of marginal lands and shortened fallow, contributes to soil degradation. Cotton cultivation further aggravates the picture, since it is a crop contributing to the ongoing acidification process. A long run effect may then very well be increased soil degradation and a lower food security.

I have through interviews noted a deeply rooted fear of taking risks among the peasants in Gandaogo. A vast majority expresses unwillingness to undertake “unnecessary” risks. They prefer others to take the risks, and are ready to follow, when others succeed. I have also observed in this village, a widespread influence of tradition, which among other things is manifested in that most people act according to well-established patterns. When the government promotes cotton, and when early adopters succeed, many are anyhow ready to follow. This is in part because

cotton has been grown in the village for many years, and because there is a tradition of cotton weaving in the village. The increased incomes then become one of many factors that contribute to the adoption of cotton cultivation.

There are different reasons why farmers adopt cotton cultivation. It is highly possible that they have more than one motivation. It is also probable that there is more than one outcome of the cultivation. In the short run, incomes will probably increase, and food security will improve, since not only cotton crops, but also food crops will tend to increase. But in the long run, food security will decrease through soil degradation resulting in lower harvests. One strategy may then be to try to compensate for these negative effects, through investments in soil improvements, while obtaining the positive effects of the cotton cultivation.

One indication that this is happening is the adoption of composting techniques by Gandaogo farmers. With the support of extension workers, many have recently started to build containers for plant residues and manure, which they later spread on the fields as compost. Even in this activity there is a clear pattern of imitation, since the size and shape of these containers are the same, regardless of the needs of the individual household. Furthermore, interviews with farmers show that many of them are aware of the problems with soil degradation. They observe evolutions in neighbouring villages, such as Moaga, Tentogo and Toisin, where cotton cultivation is rapidly decreasing because of soil degradation. And the need for applying compost in order to halt soil degradation is referred to (interviews, November 2001).

What the chart above indicates is that rational calculation may be combined with acts where peasants follow the example of others. This latter logic may be applied both in the process of introducing something new as well as when keeping a standardised pattern of behaviour. If an initiative from outside is strong enough, and if it fits with the overall behavioural pattern, the end result might then be a change of behaviour at individual household level, for example in the form of taking on cotton cultivation.

Cotton is one of the agricultural products with greatest economic potential in Burkina Faso. Yet, the peasant adoption of cotton cultivation is characterised by careful judgements and imitation. And when a process of adoption finally seems to have taken off, it stagnates after a few years, because of decreasing inflow, and a continued high exit of growers. There has also been a steady decrease in overall profits from cultivation, as well as in mean profit per producer, which may reduce the interest in cotton cultivation.

I have thus discerned many different and simultaneous reasons for adopting the cultivation of cotton. Together, they form a complex set of motivations that includes both the search for profits, and increased food security, as well as a search for belonging and for upholding tradition. In this sense, cotton cultivation is an illustration of how economic dynamism and expansion are combined with the upholding of identities. Especially the divergent rates of adoption among different ethnic groups support this latter statement. In Gandaogo we may see as well that the long-standing tradition of weaving cotton cloth also serves as a basis for contemporary adoption of cotton cultivation.

### 6.3 Cattle Breeding

The methods for cattle breeding have undergone major shifts in West Africa during the last three decades. After the droughts of the 1970s and 1980s, herdsmen in Mali, Niger and Burkina Faso have moved towards the south, and sometimes continued into Côte d'Ivoire, Ghana, Togo, Benin and Nigeria. Other factors contributing to this process have been the gradual reduction in the tsetse fly populations in the south and increased use of ploughs in the more fertile agricultural areas, which has encouraged the integration of agriculture and livestock. Another factor has been the agricultural expansion through which grazing areas have been transformed into agricultural fields (Oksen, 2001, p 303).

Following these changes, and initiated by changing market conditions for meat, a marked expansion has taken place in cattle breeding and sale and export of meat in Burkina Faso during the 1990s. There are reasons to be careful when interpreting statistics on cattle in Burkina Faso. Measuring problems are immense, and there are numerous other reasons why figures published may be misrepresenting reality. This scepticism is reinforced while working with actual figures, when e.g. exactly the same numbers appear in several boxes in official tables. What are the probabilities that the provinces Boulgou and Comoe should reveal exactly the same numbers of donkeys a given year, while Kenedougou has the very same number of pigs? What are the probabilities that the provinces Sanguie and Soum should end up with exactly the same number of sheep (Ministère des Ressources Animales, 2000, table 1, p 8)?

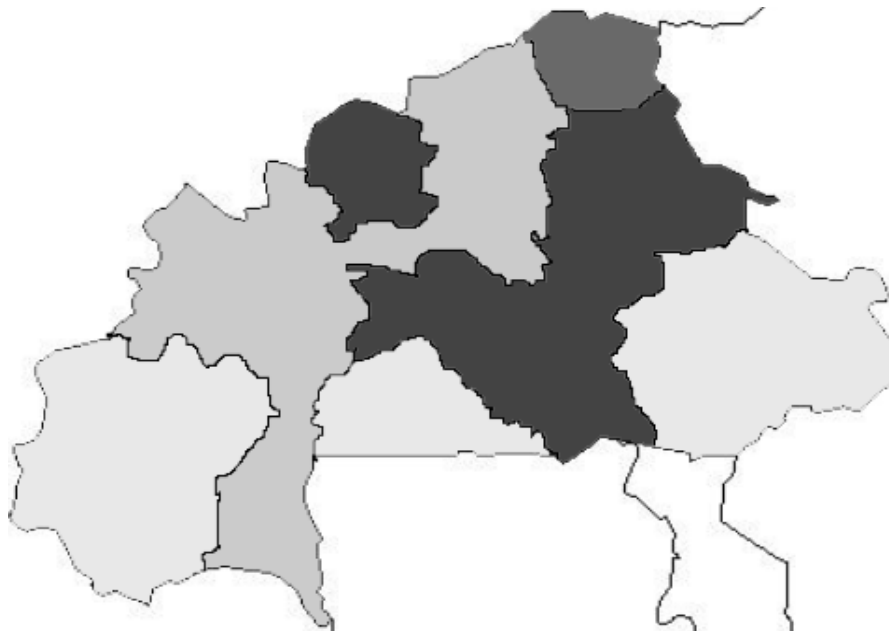
This tells us to treat cattle statistics with great care. But perhaps we may still use them in order to get some sort of overview over what is happening in the sector. We could later try to combine such a picture with information from other sources that could support or question the descriptions that emerge from the statistics.

The statistics may give a rough idea about the division of cattle between the provinces. The following graph gives the basic picture for 1999 – the latest year for which complete statistics are available. The table shows absolute quantities of cattle, and it indicates that the largest herds are kept in a belt stretching from north to south in the eastern parts of the country (Seno, Gnagna, Gourma, Ganzourgou, Boulgou), as well as in a belt that cuts from western to central parts of the country (Kossi, Mouhoun and Bazega). This pattern has been fairly stable during the 1990s.

This message is roughly consistent with statistics on rural household shares of incomes from different sectors. Those statistics show that cattle breeding accounts for the largest share of average household incomes in the north-central, the eastern and the Sahel regions of the country. It is of course not possible to compare such figures straight away since the share of total income depends on the size of other incomes. In a poorer region the share of cattle breeding may be large, even if relatively few animals are kept. But it still gives a rough idea of the situation.



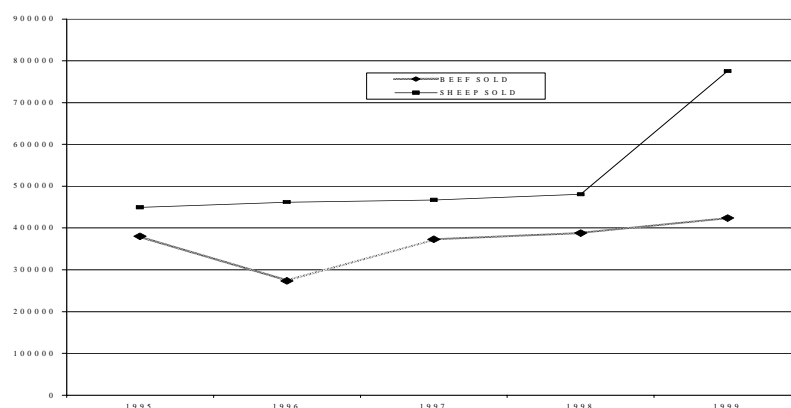
**Map 6.1:** Geographical Distribution of Cattle Kept in Burkina Faso



Source: *Jeune Afrique*, 1998. The darker the areas, the higher the concentration of cattle kept.

We may note that there has been a steady increase in the number of cattle kept, and traded, during the 1990s. Figures for animals sold are perhaps somewhat more reliable. Here we may note that increases have taken place, but in rather modest ways, except for the record sale of sheep in 1999. This year uncounted, the average annual increase in sheep traded during the 1990s has been 1.4 per cent, whereas the average annual increase in cattle traded has been 2.3 per cent. Both these figures are lower than the increase in human population during this period.

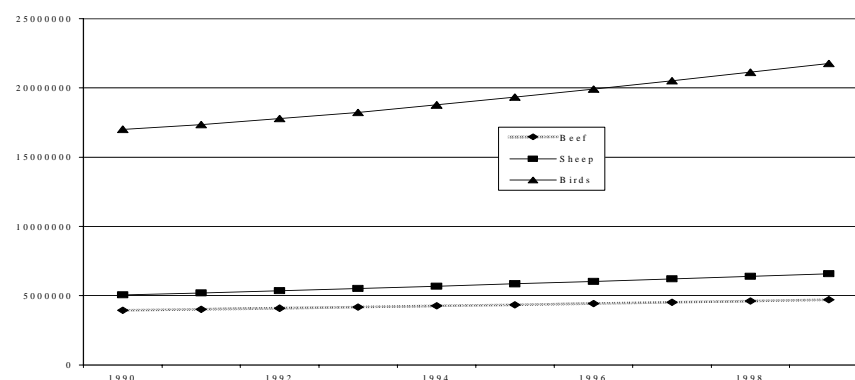
**Graph 6.6:** Number of Cattle Sold in Burkina Faso



Source: *Ministère des ressources animales*, 2000, tableau 18, p 28.

When it comes to figures over animals kept, increases may also be noted. Average annual increase in beef kept was 1.95 per cent during the 1990s. The stock of sheep increased on average 3.05 per cent and the stock of birds by 2.79 per cent annually during the 1990s. The last figure is comparable with population growth. The stock of sheep has grown faster than the human population, but the stock of beef has grown slower than the population growth.

**Graph 6.7:** Number of Animals Kept by Burkinabé Households



Source: Ministère des ressources animales, 2000.

**Table 6.6:** Exports of Cattle from Burkina Faso

	1991	1992	1993	1994	1995	1999
<b>BEEF</b>	92029	92422	101558	173023	147929	131895
<b>SHEEP</b>	58154	71684	131465	162638	171403	187219

Source: Ministère des ressources animales, 1994, 1996, 2000.

Exports of animals have increased more than the total cattle breeding in the country. In particular the export of beef increased strongly in 1994, after the devaluation of the CFA franc. Ivory Coast is by far the largest importer of Burkinabé beef as well as other animals and meat. Other important importers are Togo, Ghana and Benin. Among these countries, only Ghana uses another currency than the CFA franc. Hence, the devaluation effect must have made these other importing countries replace meat imported from outside the FCFA zone, e.g. from Europe, with meat from Burkina Faso. The export of beef has declined again since the mid-1990s, according to these figures. Export of sheep has, however, increased steadily, albeit at a slower pace during the last half of the decade.

When summarising these different trends, we may state that the geographical distribution of cattle breeding in Burkina Faso is fairly stable. The central parts of the country, with an emphasis on the centre east, are where cattle breeding is most widespread. We may also conclude that there has been an increase in cattle breeding during the 1990s, albeit not as fast as the population increase, whereas the increase in animal trade has been more significant.

### *6.3.1 Cattle Breeding on the Mossi Plateau*

Smallholders in the village Zambanga claim that their village is the most dynamic in the whole province of Namentenga when it comes to cattle breeding. A large majority of the inhabitants breed cattle and the total stock in the village is clearly larger than stocks in comparable villages. Proof of the breeding is visible around the village, where herds of animals stroll around, as well as in the midst of the village, where a large dam is kept for watering cattle. One explanation for this focus on cattle breeding given by peasants themselves, is external support in terms of credits and education from an NGO (focus group interview, Mossi peasants, april 2002).

Historically, it was people belonging to the Peuhl ethnicity that bred cattle. Mossi peasants have during the last half century gradually increased their cattle breeding. It is during the last ten to fifteen years, however, that Mossi peasants have come to realise that cattle breeding is essential for their survival in Zambanga: "Without our cattle, we would have had to leave the village. Our forefathers also bred cattle, but not to the extent that we do" (focus group interview, Mossi peasants, april 2002).

Cattle breeding is used as a complement to crop growing. No-one, not even from the Peuhl ethnicity, breeds cattle in isolation. The combination of crop cultivation and cattle breeding has more than one dimension. Manure from the animals is used on the lands in order to decrease, or stop the degradation of the soils and to increase harvests. Animals are used for traction, and may therefore contribute to the cultivation of larger fields. In the event of crop harvest failure, cattle serve as insurance. Cattle also serve the function of providing a means of saving and resource accumulation. And the keeping of different kinds of animals regulates the level of liquidity in a household. Hence, cattle breeding serves multiple functions in a peasant household. And strategies with optimal combinations of cultivation, breeding and also other complementary economic activities are sought.

As described by Oksen (2001, pp 304-308), the increasing integration of livestock and crop-farming may be part of a process of agricultural intensification. Oksen differentiates between intensification (increase in capital and labour investment per area) and expansion (the cultivation of lands that have hitherto not been cultivated). Expansion may imply extensification (decline in input and labour investment per area), but extensification can also happen without expansion, e.g. when the local work-force emigrates. Hence, Oksen discusses expansion. Both intensification and expansion signify agricultural development, however at different stages of the process. When land is abundant it is more likely that expansion will take place. Expansion may in such cases be seen as a fore-runner to intensification, in line with the arguments of Ester Boserup (1965).

However, it is possible as well that expansion may lead in a different direction compared to intensification. The process need not at all be straightforward. Expansion, if unaccompanied by anti-erosion measures, may lead to environmental degradation and loss of soil fertility. It is often also associated with deforestation. In situations where the agricultural potential is low and it may be hard for the peasant to see the benefits of further investments, or in situations of hostile policy environments, intensification may not be feasible when expansion is no longer

possible (Oksen, 2001, p 307). Furthermore, what is of relevance here is that expansion of crop cultivation may mean that limits are imposed on the breeding of livestock.

Livestock become integrated into crop cultivation systems because of the need for more manure and animal traction. Increased yields will provide more fodder and crop residue for the feeding of animals. But at the same time conflicts between farmers and cattle owners will be more common and more intense, when animals stray into the crop fields more often. These conflicts may contribute to the breakdown of trust between the groups and an expansion paradox may emerge: instead of acting as a forerunner to intensification, expansion may actually work against it (Ibid, p 308).

Traditionally a division of labour was maintained on the Mossi Plateau, where the Mossis focussed on cultivation and the Peuhl concentrated on cattle breeding. The Mossis asked the Peuhls to also take care of their cattle. The animals belonging to Mossis were integrated into the herds of Peuhl, and these were taken along when the Peuhl took their own herds long distances in order to find pasture. A rental system was applied, where the Peuhl obtained food and clothing and one cow each third year for taking care of about five to ten animals during such a period (focus group interview, Mossi peasants, april 2002).

Binswanger and Rosenzweig (1986) have explained the rationale of such a system. In settings characterised by covariant risk, and where formal insurance systems are basically absent, accumulation of assets is the main road towards dealing with such risks. This is because credit is seen almost as a substitute for insurance, and because collateral is needed to obtain credit in many instances. Hence, assets with high collateral value will be valued over and above the utility of their consumption or production stream (Ibid, p 512, 515). To say that risks are covariant means that negative outcomes tend to affect a large number of people at the same time, and that problems hit indiscriminately and broadly. To accumulate assets in such settings means to build up a buffer against the unforeseen. Most often assets in such settings mean cattle, since animals may survive on grass even in years when rainfall has been too limited for supporting decent harvests. When droughts hit, the cattle may also be taken out of the affected zone.

There are initial economies of scale in herding, in terms of labour use and also in terms of a specialised knowledge about grazing areas and animal husbandry. This makes it rational to develop rental systems, where specialist herders take care of the cattle of others. Hence the system where Peuhl take care of the cattle owned by Mossis has been an efficient system. Long-term contracts and repeated interaction between the two groups have been established in order to deal with the moral hazard problem inherent in such systems (Binswanger and McIntire, 1987). The long-term build up of trust between two sides is important to take into consideration when analysing the establishment of such contractual relationships (Dorward et al, 1998, p 27).

During the last ten to fifteen years this cattle rental system has gradually been abandoned. Nowadays Mossis still leave some of their animals with the Peuhl, but only when they stay in the close vicinity of the village. Some of the Peuhl keep the

cattle within a range of 15 kilometres from the village. It is with these Peuhl that Mossis still leave their animals. When the Peuhl move further away, the Mossis nowadays retain their animals. Instead of letting them move away long distances with the Peuhl, the Mossi leave their cattle under the supervision of their own children.

The explanations for this change diverge. Mossis claim that Peuhl have started to steal more animals than before, that they sell the animals of Mossis and keep the money for themselves when far away from the village. Peuhl claim that trust has decreased between the two groups and that Mossis are more interested in keeping their animals in the village in order to make better use of the manure on their fields. Neither of these explanations gives a fair representation of the dynamics taking place, which have resulted in this change in cattle keeping.

A broader understanding of these dynamics needs to start in the underlying process of soil degradation and increasing volatility of rains. During the period 1961-1970 annual rains reached on average 777 mm in the neighbouring town Boulsa, which is five kilometres away from Zambanga. During the period 1971-1980 these averages had gone down to 662 mm annually (SOFITEX, 1982, annexe). This trend of lower levels of rain results in decreasing harvests per surface unit area. In addition, the environment undergoes changes in terms of decreasing tree coverage, biodiversity and subsequently in terms of soil degradation. Basic conditions for agricultural production deteriorate. This is also reflected in fieldwork interviews. A vast majority of respondents claim that their situation has become worse in terms of agricultural production. Most of those are worse off nowadays compared to earlier, and need to increase their cattle breeding in order to make ends meet. A smaller number of households may have experienced improvements in their overall economic situation. But even those households claim that one needs to work much more nowadays in order to harvest the same amount of crops as earlier.

Against this background the Mossi peasants have put increasing emphasis on utilising the manure from their animals to improve their soils. They have also been advised by government extension officers to keep their cattle nearby in order to be able to feed them properly. Such more intensive feeding of the cattle gives them a higher price on the cattle market. These changes have led the Mossis to be less willing to leave their animals with the Peuhl. The Peuhl, on the other hand, have become more interested in getting access to better soils, since they traditionally cultivate more peripheral soils of lower quality. Increasing tensions over land issues have taken the form of more instances of animals strolling around destroying crops, and possibly also cases of outright theft of cattle, as the accusations go.

This process of climatic change has also made pastures more difficult to find. Peuhl have been forced to take their herds further and further away from the village. This has made it impossible for Mossis to monitor the Peuhl as they used to do years ago. Earlier, the Mossis could use their network of relatives to track the movement of the Peuhl. If a Peuhl claimed that a cow had died, it was often possible to verify the truth in such a statement. Nowadays, herds move longer distances, and more often pass outside the range of such social networks. On top of that, the transportation of animals on lorries has become more common. Such a practice opens up new opportunities for quickly removing animals. Regardless of

the level of trust in the accusations of increased theft, the foundation for Mossi trust in Peuhl has decreased. This is mainly related to reduced possibilities of monitoring the movements of the Peuhl.

Another process of change is the increasing commercialisation of cattle breeding, which has taken place the last decade. Many peasants regard the cattle trade as increasingly profitable. It is important to observe that the cattle trade may be increasingly profitable, at the same time as households may experience deteriorating living conditions. This is so because crop cultivation is still their most important economic activity, and because other factors may hinder the further expansion of cattle breeding. In years of bad harvests, like for instance 2000/01, almost every household in the village which had the possibility sold animals in order to buy food. Such a situation made the stock of cattle diminish considerably in one season (focus group interview, Mossi peasants, april 2002).

The cattle trade is, in the case of Zambanga, to a large extent oriented towards the cattle market in Pouytenga, some 50 kilometres away. The Pouytenga market is the largest cattle market in Burkina Faso, with traders coming from neighbouring countries in order to buy cattle. The process of commercialisation has led to a shift amongst the Mossi peasants from the breeding of cows into increasing breeding of bulls. It takes at least four years of breeding before a cow obtains the highest price possible on the market. However, a bull may be sold for a maximum price after only one year of breeding. As a commercial strategy the breeding of bulls is much more profitable, because of the higher turnover rate. "If you breed cows you do it because you plan for the future, if you breed bulls you do it with the objective of earning money through the sale of them" (focus group interview, Mossi peasants, april 2002).

There is a marked difference between Peuhl and Mossi in this sense. Peuhl still regard milk production to be part of the reason to breed cattle. They also argue that the breeding of cows is necessary in order to renew the herd, and keep a natural balance. Mossis, and the young men in particular, are more oriented towards the commercialisation of cattle. To them cattle breeding is a commercial activity rather than an activity related to their cultural identity.

It is a combination of climatic change and deteriorating conditions in terms of pasture and water access, and an increased commercialisation and increasing demand that form current practices in cattle breeding in Zambanga. The processes involved have caused the level of trust in the village, as well as in the broader society, to decrease. Without this trust, and with an increasing pressure of needing to take the herds further away in order to feed them, the old system of labour division between Mossis and Peuhl has almost totally broken down.

Mossis keep their cattle near the village, in order to feed them more quickly, by adding fodder, which they have bought. This increases the pressure on nearby pastures and water, while the manure from the cattle enriches the soils under cultivation. There are clear limits to how much this form of cattle breeding may be expanded. Increasing conflicts over natural resources are emerging. An indication is that a new system has recently been set up in Zambanga to deal with problems concerning crop destruction by animals. The village has bought fences with

contributions from the different households in the village. Two appointed persons will be responsible for taking care of and keeping animals that are found in the fields destroying crops. When an animal is caught, the owner will be called for, and the problem will be discussed. If no solution is found, or if the owner ignores the issue, he will later be charged a sum of money in order to get his animal back. The sum will increase the longer the animal is kept in custody. Part of the system is also the collective purchase of fodder, and it is a clear message to everyone in the village to keep control over their cattle. In this sense the village is setting up a new structure for policing conflicts between cattle breeding and crop cultivation.

The Peuhl, who have less access to good soils and who continue to depend on their more traditional semi-nomadic form of cattle breeding, need to take their cattle further and further away. They have already reached the limits set by national borders, as they move their cattle up to 2-300 kilometres southwards to the borders with Ghana and Togo. They refrain from crossing the borders since they know what bureaucratic difficulties such moves would bring. Hence, there are also clear limits to their form of cattle breeding in terms of availability of pastures and water.

### *6.3.2 Discussion*

We will later investigate the issue of contractual change between the Mossis and the Peuhl. What emerges is a shift from a division of tasks that used to be efficient, into a system where everyone is more or less undertaking similar activities. Both Mossi and Peuhl are nowadays cultivating lands and breeding cattle in parallel. Hence, together the two groups are currently utilising and exploiting the natural resources in and around the village more intensively than they used to do.

As we have seen, conflicts around the keeping of cattle, as well as around access to good lands are becoming more common. There is increasing demand for meat and cattle on the market. A shift is underway towards the breeding of “faster” meat, through the substitution of bulls for cows. This shift is also manifested in more cattle being kept and bred in and immediately around the village. This may very well be a first step towards a sedentary practice of cattle breeding instead of the semi-migrating form that still predominates.

These shifts have some inherent contradictions, however. When cattle are kept near or in the village, the pressure builds up on natural resources. On the one hand, more manure will be available, and somewhat larger yields may be reaped. But in order to sustain increasing human and cattle populations, this shift towards a more intensive agricultural system needs, on the other hand, to be more fast-working than we are currently witnessing. Maybe the underlying pressure will result in changes towards a more intensive cultivation. But for the time being, there are clear limits on how many cattle may be bred. The availability of water and pastures are the bottlenecks.

In sum, what emerges may be understood from the perspective of the “expansion paradox” referred to above. Instead of leading to an intensification of agriculture, the expansion of crop cultivation into hitherto unused areas works against the intensification, and a more efficient system of production. A study undertaken by Oksen in the province of Boulgou in south-central Burkina Faso, comes to the

same conclusion. The entrustment system between, in that case Bissa farmers and Peuhl, is rapidly breaking down in that area as well. This leads to a situation where expansion is not followed by intensified crop cultivation but rather a less efficient use of productive resources (Oksen, 2001, p 328).

“Because animal husbandry is based on the interaction of two distinct socio-economic and cultural groups each with their own land use system, expansion in one system leads to marginalisation in the other. In contrast to dominant theories of agricultural intensification, the case points to the need to distinguish between agricultural expansion and intensification at least in situations of interrelated but distinct land use systems” (Ibid, p 328).

Another aspect involved in this shift of contractual forms between Mossi and Peuhl, is the economic relations within Mossi households, and the way in which such relations shift between generations. These issues are also visible when it comes to cattle breeding. Young men are increasingly free to breed their own cattle, and they are to an increasing extent able to control the profits they gain from this activity themselves. Many of the young men are at the same time involved in other commercial activities, or they migrate to find work seasonally. This means that they often depend on relatives for the daily care of the cattle. However, their breeding economy is, in spite of this, seldom mixed up with the household economy.

These separate financial circles within the household are possible because the roles are very different between household heads and unmarried younger men. It is when men get married, and take on responsibility for a household that their role changes, according to the peasants themselves. With the increased responsibility that comes with the role of the household head, one starts to think more about food security, and the livelihood perspective changes. One or two generations back, young men were much more integrated in their households, and such integration may still vary between different households. But a general trend recently is that young people are much more independent from their households, and hence that different financial circles in the household become more distinct.

Still another division of roles concerns smaller animals, such as sheep, goats and chicken, most often belonging to women. Breeding of cattle is still an activity fully controlled by men, while the breeding of smaller animals is an area for women. This has a bearing on the financial transactions within the households, and the total household economy. An optimal strategy would have been to be able to move resources freely between the breeding of smaller animals, cattle and investments in crop cultivation, according to the optimal use at any given moment. Since several of these activities are controlled by subgroups in the household, such transfers become more difficult to undertake, and the money is often channelled to alternative uses. We see once again that the highly separated financial circles within the households, described by Ancy (refer to Chapter 7), serve as hindrances to further accumulation and development of each of the distinctive economic activities.



## 6.4 Growing of Vegetables

Vegetable cultivation in Burkina Faso was introduced during the early years of French colonisation around the economic and administrative centre of the country, Bobo-Dioulasso. The colonial authorities introduced compulsory gardening. This was a way of contributing to the feeding of the military and the colonial administration. After World War II forced labour was abolished, but many local villagers continued to grow vegetables during the dry season. A growing urban population created demand, and conditions for cultivation were beneficial north of the city. For some 30 years growing and marketing of vegetables were considered lucrative and desirable occupations (Freidberg, 1997, p 109).

However, from the mid-1970s onwards problems started to emerge. The water table began to fall, and soil fertility declined. Growers had to spend increasing amounts of money on fertilizers and motor pumps to attain the same levels of harvest as before. Furthermore, with the military coup in 1983 much of the market for vegetables diminished or disappeared. Wholesalers from Ivory Coast or Togo were no longer welcome since the revolutionary government had banned cross-border trade in fresh products. And many Burkinabé businessmen left the country. They were labelled “greedy” or other even more derogatory judgements were made about them in the government’s revolutionary rhetoric. In such an atmosphere working conditions for businesses deteriorated quite markedly (Ibid).

However, the counter-coup, the “rectification” and the subsequent promotion of enterprises under the regime of Blaise Compaoré from 1987 onwards, did not lead to great changes in business opportunities for the market gardeners around Bobo-Dioulasso. The economic centre of the country had moved from Bobo-Dioulasso to Ouagadougou, and the remaining local market in Bobo-Dioulasso had limited bearing capacity. Contributing to a weak demand was also the national economic austerity programme, which was initiated in 1991, after agreements with the World Bank and the IMF. With a depressed local economy, a need was seen for reaching foreign markets where higher prices could be obtained. These intentions were given a push by the 50 per cent devaluation of the CFA franc in early 1994. Vegetables from Burkina Faso started to find their way to Abidjan and other larger cities on the coast. A few, larger entrepreneurs also started to export vegetables, first and foremost French green beans, to Europe.

Susanne Freidberg has shown what conditions are required for these entrepreneurs to emerge. The fact that they are exclusively men, who all have a starting capital from other lucrative parallel activities, or can access alternative streams of capital, indicates that entry barriers generally are social in character. Freidberg highlights the importance of having access to places and environments where business contacts may be built, such as bars and hotels. Another aspect that she emphasises is the need to distance oneself from kin who otherwise would probably prove more a burden than a boon to the business (Labazée, 1988 and Freidberg, 1997, p 121). The tradition of mutual dependency within the family seems to be a great obstacle to the development of trade in vegetables, since profits may be diverted from needed investments towards taking care of family needs.

By alluding to “the men’s club”, Freidberg indicates that female gardeners, who greatly outnumber their male colleagues, have very different possibilities to establish themselves in vegetable trading. Their trading remains small scale, in spite of their massive control of the local vegetable market during a number of years. Even seen as a lifetime project, these women stay with their small scale vegetable trading. Sometimes both customers and plots for cultivation are inherited by daughters who carry on with the family business. The fact that there are few sources of credit for these women to expand their businesses is only part of the explanation. More important may be their exclusion from the social links that are needed in order to develop cross-border trade with vegetables. Freidberg describes the social interplay that produces entrepreneurs in the following way:

“Clearly, the agro-entrepreneurs benefit from the capital, skills, experience, and connections they bring from their other occupations. But these advantages bear fruit only if used to cultivate further contacts, more skills, and bigger sources of financing. Much of this footwork takes place in markets and villages, in offices, libraries, and banks. But the activities conducted at ‘after-hours’ meeting places are also crucial, both for what they produce and whom they exclude. Food-and-drink establishments are abundant and often short-lived in Bobo-Dioulasso, as in many West African cities, but those frequented primarily by businessmen (both local and foreign), aid workers, politicians, and top-level bureaucrats are relatively few, and easily identified.....The contacts made, deals forged, and ideas generated in this milieu can do at least as much for an aspiring entrepreneur’s career as the most diligent research and record-keeping.” (Freidberg, 1997, p 122).

Hence, this process of exclusion results in a situation where the few existing entrepreneurs in vegetable exports are all men with influential standings in society. Young men, as well as women, are all absent from this activity.

In the country as a whole, the growing of vegetables during the dry season has increased since the early 1980s. After droughts and during the years of the revolutions, efforts were made to spread the building of dams, in order to make more efficient use of scarce water resources. The government, as well as several NGOs got involved in these dam projects and in particular in the Northern province of Yatenga, where the town of Ouahigouya has become particularly known for its market for vegetables. The building of dams is still a fairly common development intervention undertaken by NGOs. (Lédéa Ouédraogo, 1990). When devaluation and other political reforms added increased market opportunities, increasing numbers of people started to cultivate and sell vegetables. Statistics over the development of vegetable growing are hard to come by, and are furthermore contradictory. But the following table may give an indication of developments during the 1990s.

**Table 6.7:** Production of Vegetables and Fruit

	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99
Production (metric tons)	346	379	394	411	430	410	430
Annual increase (%)	4,0	4,0	4,0	4,5	4,5	-4,6	5,0

Source: IMF, 1999, table 5.

Geographically most of the vegetable production is concentrated to two provinces in the western part of the country, Houet and Mouhoun, and to some provinces on the Mossi Plateau, primarily to the east and southeast of the capital Ouagadougou. The highest producing province, however, is the Yatenga, in the northern part of the country. In the sahelian provinces in the north, and in the eastern provinces, there are almost no vegetables grown. Per capita production of vegetables differs also quite substantially between the different provinces. In the province of Sanguié (halfways between the capital Ouagadougou and the second largest city Bobo-Dioulasso) per capita production is above 50 kilos per year, whereas it is around 10 kilos in the majority of the other provinces (IMF, 1999).

#### 6.4.1 Vegetables on the Mossi Plateau

Vegetable cultivation on the Mossi Plateau takes place mainly during the dry season, primarily on lands surrounding dams that have been built during the last 25 years. Some of the cultivation takes place in the vicinity of cities, where a market outlet is easier to find. But even in small and remote villages there are usually market outlets, either at the village markets or through traders that visit the villages. The dams have often been constructed with the support of the government, NGO:s or other development actors. The push for constructing dams came after the drought and famine years of the early 1980s. Peasant groups were organised, and especially the “Naam”-movement was active in the promotion and construction of dams.

Irrigation channels and/or motor pumps with pipes often surround the dams. In some cases irrigation is also undertaken by hand with buckets and watering cans. In the beginning, cultivation was organised by the initiators of the construction projects. But nowadays, other organisational structures and principles in relation to irrigation have emerged.

In order to study vegetable cultivation on the Mossi Plateau, 54 interviews in 31 production units were done in the village of Korsimoro, where a large dam was constructed in the mid-1980s. While travelling through the Burkina countryside, the landscape changes drastically close to the dam in Korsimoro. Suddenly the brown, red, sandy colours change into different shades of green, as the onion, tomato, corn and rice fields become visible. The impression is that one has suddenly moved to another part of the world, so drastic is the difference.

In Korsimoro the social structure is somewhat different from that of Gandaogo or Zambanga. The people cultivating vegetables around the dam have in most cases moved here with that specific purpose in mind. Many of them are living here only during the dry season. Others commute to nearby villages on a daily basis.

Generally, the houses of cultivators are situated at varying distances from their vegetable gardens, and work is most often organised in other constellations than along pure family lines. The most common way of organising the work is to create a peasant organisation that negotiates with the original inhabitants in the area the right to use a piece of land close to the dam.

Another system is that individual strongmen negotiate the right to use the land, and then engage a number of peasants to do the actual cultivation. Those holding rights to the lands very seldom cultivate vegetables on more than a fraction of the land they control. They however retain their lands for the cultivation of cereals in the rainy season. No market-based transfers of lands were found in Korsimoro, only the practice of lending lands. No fees were involved in this lending, even though most of the lenders expected some gift, in cash or in kind, after the cultivating season.

The groups that cultivate together are usually formed after an official call at the Korsimoro market at the end of the rainy season. Whoever has the ability to work one or more vegetable plots, and has the means of paying the fee for the motor pump, may join the group. Often the potential members come from distant villages or places like Loumbila, Ziniaré, Soubeira, Boulsa - places sometimes more than 50 kilometres away. This was especially the case after the cereal harvest failed in 2000. Many opted, for the first time, for the cultivation of vegetables during the dry season. They presented arguments like “we have no other activities to undertake this time of year“, and “we could not stay without doing anything“. Usually some of the group members belong to the family that controls the land utilised. In this way, the family controlling the land obtains a direct link of information to the activities and successes of the group. It becomes easier to keep a certain level of control over the group that way (Paré, personal communication, 10 October, 2001).

When a group has been formed, a general meeting is held. On that occasion decisions are taken as to how many members to allow, what fees to charge for the use of the motor pump and what vegetables to grow. All the groups that were mapped through the interviews were cultivating the same crops on all their plots. This practice turned out to be somewhat strange, since no coordination - with the exception of the cultivation of French green beans - is undertaken either in the buying of inputs, in the actual cultivation or in the marketing phases of the production chain. Every member works on an individual basis except for co-operation around the irrigation system.

Gardening plots of the same size are also distributed at the general meeting. If some members have more resources, they may cultivate more plots than others. But a balance is upheld, so that every member gets at least one plot, allowing all those wanting to become members to enter the organisation. When asked about this process, all respondent were at first vague in their responses, arguing that land is usually available for everyone who would like to cultivate. When further questions were asked, however, a picture emerged of a deeply rooted system for land distribution that is inherently conflict avoiding.

We will discuss these systems for resource distribution in more detail later. At this stage we will note that group membership is highly valued. Even in cases where the confidence in the group leadership is very low, people choose to enter and remain in these groups. One factor influencing this decision is the possibility to have access to irrigation through the group.

Irrigation is undertaken through the use of motor pumps. Water is piped up to water points, from which irrigation channels are drawn. The flow of water is directed by the building of mud bounds. When channels irrigating vegetables are sufficiently filled, water is allowed to continue to the next few rows of plants. Irrigation schedules are basically followed. Most common is a three-day circulation scheme. But because of the good availability of water, no strict application of these schedules is maintained. People may on occasion water their fields at non-scheduled times without sanctions.

At the beginning of the dry season many opt for the cultivation of French green beans. This cultivation is undertaken on contract with UCOBAM or other companies that supply the peasants with seeds and inputs. The costs of these inputs are deducted from the price the peasant receives on selling the harvest. A “*tieing*” system is thus used. It often takes a long time before the payment arrives in the hands of the peasants. The green beans are exported, often to France at Christmas time, and the profits are calculated on the total income generated.

When this contract farming is finished, the groups are free to cultivate according to their choice. Most of them opt for onions or tomatoes; almost no variation on this theme exists in the whole of the Korsimoro area. The only example of a more varied cultivation was undertaken by an original inhabitant of the village, who started to cultivate vegetables some 15 years ago, and who has ever since been innovative in his cultivation decisions. This peasant was also the most prosperous in our sample.

The Korsimoro vegetable cultivation has seen an enormous expansion since the dam was constructed in 1984. Especially the last five years have seen a fast expansion. Around 70 different motor pumps could at the time of the fieldwork be found around the dam, each serving at least 50 plots, each of 60 m<sup>2</sup>.

Seeds and pesticides are bought from vendors who come regularly to the area. It is hard for new vendors to establish themselves. And it is even harder to introduce new seed varieties. Peasants are very careful about the selection of varieties. Among the at least ten groups covered in the interview material (“*at least*” because some were members of more than one group), only one group were trying new and improved seed varieties. According to vendors themselves, peasants are only ready to try new varieties when their harvest has really failed. Even when samples of new varieties have been distributed free, they have been ignored.

Like cultivators in other areas on the Mossi Plateau, the Korsimoro cultivators stick to certain varieties. Onions are the most prevalent crop, followed by tomatoes. They both come in certain varieties, sold by vendors from nearby Kaya. Other vendors have tried to establish themselves in the area but have failed because of the customers’ faithfulness in their relations to vendors.

The crops are generally sold at the market place in Korsimoro. Buyers come with lorries in order to buy onions and tomatoes for sale in other parts of the country, and in neighbouring Togo and Ghana. The sale of tomatoes is extremely dependent on these big customers arriving from neighbouring countries, since the harvest rots quickly. Onions are easier to store, and may therefore be sold over time at the local market. This is the main reason given for many cultivators preferring onions to tomatoes.

Even though cultivators have organised themselves in groups, no common initiatives are taken in order to search for markets. Some groups keep in contact with the buyers from neighbouring countries in order to inform them when the harvest is getting ripe, but no contracts are involved, except for in the cultivation of French green beans.

Prices vary strongly over the season, from some 20 000 F CFA for a box of 50 kg tomatoes at the beginning of the season, to maybe 7 000 later. The price may rise again as the buyers arrive with their lorries to some 12-14 000. At the end of the season prices may increase to 20 - 25 000 F CFA again. In spite of these price movements it is rare to see cultivation being planned in order to capture periods of highest prices. No one in our sample used this kind of planning. The argument advanced was that "one often has plans that seldom are realised. Uncertainty is too great and you have to be careful" (Interview, fieldwork).

The lack of forward planning is also visible in the prevalence of a rough calculation system. The most common way of finding out whether the cultivation is profitable is based on counting the number of 50 kg boxes produced. If the price stays in the range 12 to 20 000 F CFA, the first box is needed to cover expenses for seeds, the second for fertilizer, the third for the cost of the motor pump etc. Five to six boxes at this price range need to be sold in order to cover all the costs. The following boxes constitute the profit. Given that the price interval is very rough, this method of calculating is uncertain. It means in practice that the producer has a very rough idea of his or her minimum price while selling at the market place. In addition, most producers have very limited possibilities of storing the harvest. This turns the producers mainly into price takers who are obliged to accept almost any price that is offered. It is therefore not surprising that most cultivators in our sample regard the level of income from vegetable cultivation more as a matter of good or bad luck, rather than as a result of careful planning.

#### 6.4.1.1 Why Growing Vegetables?

Among the 54 people from the 31 production units interviewed in Korsimoro, only three (one production unit) were planning to go beyond growing vegetables in the future. All the rest planned to continue their cultivation. Growing vegetables is seen as a complement to cereal cultivation and to raising livestock. The three activities each have characteristics that reinforce the functioning of the other activities:

- The growing of cereals is seen as the basis, since cereals provide the peasants with their basic food.

- The raising of livestock has several functions. Cattle serve as a source of security during years of hardship since they may be sold or eaten. The production of manure contributes to increased harvests by enriching the soils. And the owning of livestock is in itself a symbol of wealth. While being a relatively liquid form of capital, livestock is also a means of accumulation.
- Through the sale of cereals and/or livestock, peasants obtain the necessary means for cultivating vegetables. These serve as complimentary food, and as still another source of cash income.

This chain starts with the growing of cereals. When the harvest is big enough to allow for a surplus to be sold, the money may be used for buying small animals. These are raised and later exchanged for larger animals. Little by little, vegetables are grown. The incomes from vegetables are then typically used for covering small family expenses, and for buying more cattle.

What we are dealing with here is a kind of diversification of income sources, even if I argued in earlier sections that the Mossi tradition is not very open to income diversification. The paradox involved is not that great however. The kind of diversification we meet in Korsimoro is neither of a kind that tries to spread into a maximum number of different activities, nor is it a diversification that seeks to enter new markets. It is rather a kind of diversification that seeks to re-concentrate on the core activities of growing of cereals and on the raising of livestock. If it succeeds, it means that the peasant household reinforces its original role as a self-supporting agricultural unit.

Elements of overcoming entry barriers are clearly present. One moves from growing cereals to raising livestock, to growing vegetables as one acquires the necessary funds. But it is not a strategy that aims at expanding into new, unexplored, markets. It is a strategy that aims at returning to the core activities. The purpose is though to enhance food security rather than to concentrate on core activities in order to accumulate resources.

When the high reluctance to change and the subsequently low level of income diversification were discussed above, it was established that a web of indigenous institutions created this reluctance. Initially defined roles about what it means to be a Mossi peasant are reinforced. Could it be that the behavioural pattern observed in the realm of vegetable cultivation follows the same kind of logic? Or is it a behavioural pattern that follows from the existence of entry barriers, from a situation in which the lack of resources makes it impossible to undertake new endeavours?

These two rival interpretations are both possible. I will in the following try to trace them through observations about behaviour and attitudes at the individual level. By doing so, I will develop chains of arguments supporting each of these interpretations. I will start by discussing the cultural identity option.

## *6.4.2 Discussion of Critical Areas*

### 6.4.2.1 Land Use and Distribution

As discussed in section 5.3.3, very little market exchange of lands has begun in Korsimoro, even though the dam was constructed long time ago, and the value of the lands surrounding the dam has greatly increased. No charges, except the culturally induced gifts, are involved when lands are lent out to cultivators during the dry season. This was held to be because of the strong norms involved in the customary tenure system: conflicts over land should be avoided, access should be granted to those in need of lands, good relations should be maintained. The institution guiding land distribution and use is so strong that it is maintained even when market opportunities open up. This strength comes from the fact that the institution is rooted both in the history and the mythology of the Mossi people. Market expansion in vegetable gardening has to be undertaken more or less inside the framework that this institution provides, as discussed in chapter 5.

### 6.4.2.2 Why Being Member of a Group?

A majority of peasants cultivating vegetables in Korsimoro are members of different groups. The groups are formed at the beginning of the dry season by those responding to calls made at the market place in Korsimoro. Members may come from Korsimoro as well as from other villages, and efforts are made to give opportunities to all those expressing willingness and ability to cultivate. Generally, the groups are open to all regardless of religion, ethnicity or family relationships.

Apparently, one reason why group membership is sought is to get access to motor pumps. Individual peasants do normally not have the means of access to pumps on their own, but through collective efforts they are in a position to find credits from NGO:s or even from formal credit schemes. With these credits they buy motor pumps, the costs of which are refunded through a system of quotas.

But there is another issue involved as well, an issue that is related to land tenure. The example of two young brothers who have moved from Ziniaré to Korsimoro in order to cultivate may illustrate this. There is a dam in Ziniaré as well, and Ziniaré is much closer to the larger market in Ouagadougou. The reason these brothers have still moved their cultivation to Korsimoro is to get hold of more land to cultivate, than they could find in Ziniaré. They started their cultivation in Ziniaré with 10 plots, and expanded gradually. But when they wanted to increase to 60 plots, they did not see any option but to move to Korsimoro, where more land was available.

These lands were lent out to them under the ordinary rules of the customary tenure system. Such rules imply that they have to obey the fact that the land belongs to someone else, and that they have to respect all the rules that apply. With 60 plots they would have a big enough cash flow to be able to invest in a motor pump. But the argument they give for not investing in such a pump is the risk of losing the land borrowed if they did. The background is the conditions that apply for their borrowing of the land. An investment in a motor pump on an individual basis would risk being seen as a semi-permanent investment. And such an investment



would be regarded as a sign that those borrowing the land have ambitions to control it permanently.

In contrast, if a motor pump is bought and set up by an organisation, there is no signal that any individuals claim land on a permanent basis. And the fact that almost all groups contain members of the family that controls the land makes it a less provocative act. The end result for the young men from Ziniaré is that they continue to water their crops manually with water from hand-dug wells in the vicinity of the water line. It makes the growing of vegetables more labour intensive, and hence more difficult to expand.

There are other examples in Korsimoro, and other places of individuals who have borrowed land, invested in motor pumps and hired labour. In these rare cases the entrepreneurs enter into contractual relationships with peasants who are charged for the right to cultivate, is some form of a sharecropping system. In one such case, the person controlling the land is living in Ouagadougou, and is no longer a full resident of the village, albeit coming back to cultivate millet in the rainy season. This example illustrates that it is possible to expand and make the cultivation more rational. But the fact that such examples are very rare implies the existence of barriers in terms of the adherence to the customary land tenure system.

In order to open up for more contractual relations regarding land step by step and informal transformation of land tenure would be needed. And such changes take time. In such a process of change it would also first be necessary to develop good relations with those controlling the land in order to create a space for interpreting rules in a slightly different way than is done traditionally. It is striking how few the examples are of individual entrepreneurs who have bought motor pumps and negotiated access to land with those controlling it. Why is it then that group membership is a far more common system than sharecropping arrangements?

From the individual cultivator's point of view it might be that group membership opens up for slightly larger profit margins, since the collective arrangement theoretically means one less layer of middlemen. It might theoretically also mean more influence and power sharing over decisions such as land utilisation and crop selection. This latter possibility would translate into a larger flexibility in terms of possibilities of responding to market fluctuations. The way a group functions, however, means that this flexibility and power sharing are not exercised to a very large extent. Crop selections are done collectively for the whole season, and extensive power in terms of negotiating with landholders and buyers is transferred to the leaders of the groups. Surprisingly, members who have very low confidence in the leaders of their groups choose to remain as members, rather than seeking other arrangements in order to get access to irrigation.

How should we understand this relative lack of contractual relationships even though they might seem to be more advantageous? Why are not more markets developing in the allocation of labour? Above, we have already discussed the reasons for the absence of land markets. Is the relative absence of labour markets and/or contractual relations in the allocation of labour an extension of the mechanisms of land allocation? Or do reasons exist that are entirely intrinsic to labour relations themselves?

One indirect way of looking at these relations is to compare with labour relations appearing in other spheres of the Mossi society. Besides family based working relations, collective forms of work have been, and still are, important. In order to organise a “sosoaga“ a peasant asks someone to be the organiser, the “sosopusa“. This person goes from home to home in the evening or in the early morning to ask for volunteers to work on a certain date. The purpose of the sosoaga is to help someone with hard or urgent tasks, such as the clearing of new lands, ploughing, harvest, transport or the like (Lédéa Ouédraogo, 1990. pp 41-44).

The participation in a sosoaga is driven by a pressure not to be regarded as unsociable. It may also be a matter of returning earlier favours, or of extending a hand to family members. In earlier times, most people could be the beneficiaries of a sosoaga. But with the introduction of market relationships the demand for compensation has awoken. Today, a new form of sosoaga, the “modern“ version, has taken over. In this form, it is better off people that receive a helping hand in exchange for drinks and food. This means that poor people have much fewer possibilities to benefit from sosoagas. Occasionally, politicians who try to spread their messages and build relations also use sosoagas. On these occasions financial gifts are also often involved.

Other forms of collective work are the sôngtaaba or the sôngsôngtaaba (Ibid, p 43). The former is a form of collective work for collective purposes, or for a person that is in especially great need. The latter form of collective work is purely reciprocal, where work on the field of one party is immediately returned with work for the other party. Through these forms of working relationships strong social bonds develop.

There are also other kinds of work associations, such as the “kin-naam“, which is a union of young girls that work with the spinning of cotton, or the gar’kobo, which is an association dealing with the clearing of land for cultivation (Ibid, p 44f). One underlying dimension for all these collective forms of work is the view that poverty or affluence is something that is distributed by the gods or by supernatural powers. Since one cannot choose voluntarily between being rich or poor, there exists a social obligation to help others in their work.

Even if we have not found any direct arguments saying that the tendency of belonging to working groups in the cultivation of vegetables is caused by the search for social relations, we have from other areas found indications that collective working relations are an important part of the Mossi society. It might well be that these collective forms of work were developed in order to deal with situations of great uncertainty, but that they live on today because of inertia. Pure market relations could very well have developed if it had not been for strong norms being maintained.

#### 6.4.2.3 The Choice of Crops

Another area much discussed in the interviews was the choice of crops. Of the 54 persons interviewed in Korsimoro, only one was cultivating a variety of different vegetables. This was the economically most prosperous grower in our sample. He was also a person cultivating on land that he controlled himself. Another person

cultivated rice next to his cultivation of tomatoes and onions, and six persons combined French green beans with tomatoes and onions. All the other persons interviewed cultivated only onions and/or tomatoes. Observation of the plots cultivated indicates that this division fairly well reflects the total mix of crops on the fields around the dam in Korsimoro.

That some cultivate French green beans could be understood against the background that access to inputs is guaranteed by the contracts provided by traders. French green beans are also held by many to be the most profitable vegetable - when the money from the sales finally arrives. So why are so many opting for onions and tomatoes when choosing freely for their continued cultivation? For those peasants belonging to groups the decisions about crop choices are taken collectively, after open debates at the general meetings. However, no purchases of seeds or inputs are done collectively. Each member buys individually at the market, where other crops and other varieties are available. Furthermore, the cultivation of different crops on lands close to each other is possible, so there is no actual need for the monoculture that is emerging. Thus, the question remains as to why these decisions really need to be taken collectively.

The questions are even more pronounced when coming to those that do not belong to a group. Why opt for the same crops and varieties as so many others do? Finding market niches would probably be more profitable than selling the same crops as all the others.

The arguments for choosing something else to cultivate after the first harvest of French green beans are first that another round of beans is not possible because the weather gets hotter later on in the season. While waiting for the incomes from the beans to arrive, peasants are also in need of immediate incomes at the time of sale. Tomatoes seem to be a good choice, since they are often fairly profitable. The problem is that the harvest easily gets destroyed if its not sold immediately. Onions are easier to store, and therefore a good alternative option. Normally the profitability is also acceptable for onions. Both tomatoes and onions incur low costs at the start of cultivation; hence the entry barriers are rather low. But it would also be possible to cultivate other vegetables: cabbage, pepper, the local crop gombo, potatoes or even maize. The markets exist for these crops, and entry barriers are comparable to those for tomatoes and onions. The question thus remains why tomatoes and onions dominate so strongly in Korsimoro. This pattern of sticking to just one or two crops is similar in other vegetable centres, where other crops dominate.

Conditions on the market are one possible factor. For customers to arrive from great distances with lorries, there is a need to provide enough production to fill their needs; otherwise they will not return the next year? But this does not explain why peasants keep strictly to certain varieties of onions and tomatoes, why they so strongly refuse to test new varieties before they find themselves in deep trouble with their old ones.

Another possible explanation is that crop choices most often are made following the example of neighbours. This is what some of the respondents actually claim that they do. This interpretation also gets support from key informants.

#### *6.4.3 Increased Market Access Changes The Picture*

In order to see the significance of having access to larger markets, a comparison was made between the village of Korsimoro and the village of Loumbila. Both are situated along the main – paved – road between the capital Ouagadougou and Kaya. But while Korsimoro is some 70 kilometres away from Ouagadougou, Loumbila is just 15 kilometres away. Hence it is possible to take the vegetables on a moped or even a bicycle and deliver them to the market places in Ouagadougou. How then does this affect the production pattern observed in the respective village?

In order to find out, some 15 interviews were done in Loumbila, with randomly selected cultivators. This is a smaller sample than the one in Korsimoro, but still large enough to give a rough idea of what kind of differences may exist. What emerges from these interviews is that there are many similarities between the two villages. When it comes to dealing with land it is the case in Loumbila as well that the customary tenure system is upheld, that people borrow land from each other, and that gifts are exchanged in this context. No open market in land has appeared, even though indications are that more people in Loumbila have heard of land sales occurring, and that a market development is more underway here. But the general pattern in Loumbila is still that the customary system is upheld, and signs of a market in land developing are still an exception.

The actual cultivators in Loumbila seem to be children, younger brothers and women to a larger extent than in Korsimoro. In our sample in Loumbila, only three household heads appeared among the cultivators. The intra-household division of labour seems to be more accentuated in Loumbila, as compared with Korsimoro.

In Loumbila, there were stories of associations that had organised the cultivators. But these associations had in most cases disappeared. There was mentioning of dishonest leaders that had left with the money collected, of unresolved conflicts that had made the organisations disappear. At the time of the fieldwork, the majority of cultivators in the sample were cultivating on their own behalf, or on behalf of their household. Information obtained from the interviewees indicates that this may be a general pattern in the whole area around the dam. Hence, this is a clear difference as compared with Korsimoro.

Also when it comes to the choice of crops to cultivate, there seems to be a slight difference. The variation in crops is higher in Loumbila. Plots of different crops are cultivated next to each other. This may be a consequence of the fact that cultivators organise themselves less in associations. But it could be an indication as well that cultivators in Loumbila are less conservative than Kultivators in Korsimoro when it comes to the selection of crops to cultivate.

In sum, the similarities are greater than the differences between the two villages. But there are still differences. And these differences are all systematically pointing in the direction of the institutions and norms that we have previously found are slowly breaking down under the influence of increased access to the market. This means that market access is an important factor causing change, even if this change is slow. Noteworthy in this comparison is that this breakdown of institutions is not even. Some of the hindering institutions that were outlined in chapter 5 are breaking down more quickly than others. The household as the basic production

unit is increasingly questioned in a situation of larger exposure to the market. What Ancey referred to as the almost “closed” circles of financial circulation within the families, seem to be strengthened. Is this possibly the seed of labour division that could indicate a future economic structure in the society?

## **6.5 Concluding remarks**

In the study of the three most dynamic areas of the Burkinabé agricultural sector, cotton, cattle and vegetables, we have seen some common traits. All these areas are embedded in norms and customs. The adoption of cotton cultivation builds on a history of cultivating cotton, on roles that traditionally have been ascribed to different ethnic groups. In the diffusion of the cultivation there is much imitation and following of others. In the area of cattle breeding there is a move away from the customary breeding system. But since cattle breeding is so tightly connected to crop cultivation, this shift is held back by prevailing inertia in crop cultivation. And a full move towards a sedentary breeding system is not taking place. In the area of vegetables, a number of customary norms guide the production as well as the marketing. Access to land, decisions about what to cultivate, choice of crop varieties and the way entrepreneurs are given space to expand are all areas that are guided by customary norms and practices.

This means that any expansion of the cultivation or breeding in these areas is conditioned on the space offered by these norms and practices. There are limits to the expansion of cotton cultivation that are neither caused by agro-ecological factors, nor by decisions about the allocation of factors of production. There are also rules and norms guiding cattle breeding and the growing of vegetables that result in sub-optimal situations of production. But these rules and norms are nevertheless followed, because they have a rationale in a different sphere of the peasants' lives.



## 7. Differences in Dynamics

### 7.1 Explaining Dynamic Activities

It has appeared in the analysis of income diversification and of economic dynamism that the pattern prevailing on the Mossi Plateau is far from homogenous. Certain households are diversifying more than others, certain households are economically much more dynamic than others. It has also been noticed that differences are found within households, and not only between them. Furthermore, one of the important findings in this study is that economic dynamism is channelled towards certain sectors of agriculture, which in the previous chapter were called the “dynamic areas”. Hence there is also a difference between various sectors of agriculture in terms of economic dynamism.

What are the reasons why these differences appear? Why is economic dynamism channelled towards certain sectors, and driven by certain groups? Why does such a pattern emerge in a situation where major liberalisation reforms have been undertaken in the agricultural policy? The answers to these questions may be sought in a pattern that turns out to be similar for all the three dynamic activities: the upholding of a group identity sets the limits for how and where economic dynamism is possible.

In the field of cotton cultivation it emerged that ethnic identity has been quite influential as a factor explaining the adoption rate. Madeleine Père (1988) showed this in a study on ethnic groups in the western part of Burkina Faso. It is not only the fact that someone belongs to an ethnic group that is important, but also what identity that ethnic group has: Is this group known to have been a group cultivating cotton or not? What role has a particular ethnic group played in relation to other ethnic groups? Even though the adoption of cotton cultivation on the Mossi Plateau is driven by several different factors, as seen in chapter 6, this question of ethnic identity is clearly one of them. Hence, when economic opportunities appear in cotton cultivation it is possible for households to remain with their traditional identity, while at the same time taking on an activity that is economically dynamic.

It is important to also note that cotton cultivation has been spread by active campaigning undertaken by the SOFITEX company. In this field one particular actor has been promoting change. Hence, a force actively pushing for change in the behaviour of peasants has been there all the time. Change in an area where strong norms prevail is helped by active promotion, by someone who is actively trying to influence attitudes. When change is undertaken within the framework of prevailing norms, such a promotion is much more probable to result in changed behaviour, as compared with a situation where the direction of change breaks with prevailing norms.

In the field of cattle breeding, the situation is somewhat different. The traditional way of doing things is to uphold the division between the ethnic groups Mossi and Peuhl, where the role of the Peuhl is to take care of cattle breeding. However, during a longer period of time, and driven by a situation where land fertility has been greatly decreasing, even the Mossis have increasingly taken up the practice of

breeding cattle. This is, as such, a break with their customs, with the traditional Mossi ethnic identity. But it is a minor break, since the keeping of cattle always has been part of the Mossi identity. Cattle have been seen as the prime sign of prosperity, as well as a means of insurance and wealth. The new thing is that nowadays Mossis are also breeding cattle themselves. But it is a break that has been ongoing for a longer period of time. In that sense it is a matter of transforming the Mossi identity in a way that makes them a cattle breeding group as well. This change has been undertaken within a framework of active promotion by government extension workers, and in a situation where people's survival has demanded increased cattle breeding. Worsening climatic conditions have made crop cultivation more fragile.

In such a slow process of ethnic identity transformation, opportunities open up for individual households, and individual household members, to be economically dynamic. To remain with cattle in the village, instead of taking them outside for pasture, has become an increasingly common practice. When this is the case, it is at the same time possible to change the character of the breeding so that it concentrates on bulls rather than on cows. Hence, with this slow abandoning of sedentary cattle breeding, it becomes possible to make use of more market-oriented forms of breeding as well. It should be noted that the Peuhl in our sample continue to maintain the sedentary form of cattle breeding with a clear focus on breeding cows rather than bulls. The shift that is taking place concerns the Mossi ethnic group. And the reason why this is so is that Mossis are less bound by tradition in the field of cattle breeding than the Peuhl are.

In the area of vegetable growing, there still remain a number of customary habits, even if the sector as such is economically very dynamic. The cultivation in groups, relationship to land and the collective processes and conservatism involved in the choice of crops are all signs of this. Vegetable gardening is a relatively new activity on the Mossi Plateau. In that way it differs from the pattern described here for cotton cultivation and cattle breeding. The activity, conducted on a large scale, dates back to the period of the droughts in the late 1970s and early 1980s. At that time peasant organisations started to emerge, and they were promoting the construction of dams, with the objective of creating better opportunities for survival during the dry season. The spread of vegetable cultivation was a matter of one group of actors, peasant associations, actively promoting the adoption of this new activity. It was done in a situation where survival was the prime motive for the adoption. This motive was thus the strongest motive possible. However, even in such a situation the success of the promotion undertaken by peasant organisations depended on their ability to connect to the history and tradition of the villages, on linking up with the worldviews of peasants (Lédéa Ouédraogo, 1990, pp 13ff, 151ff). Today, the limits for change in the area of vegetable cultivation are clearly visible: for instance, when asked about why they do not change their way of dealing with land in relation to vegetable gardening, the peasants generally answer that if such changes were undertaken they would no longer be Mossis.

Since the peasant organisations managed to promote vegetable gardening as an activity to undertake during the dry season, they could link up with tradition in the sense that complementary work should be undertaken during the dry season.



Furthermore, they did not challenge the practice of growing cereals during the rainy season. Vegetable cultivation remains a complementary activity for Mossi peasants. It is this space within the framework of the Mossi ethnic identity that has been used in order for this type of dynamic activity to be developed and spread. And most importantly, vegetable cultivation has been undertaken in a way that maintains the central indigenous institutions that were described in chapter 5.

Even if the pattern differs between the three dynamic areas there are clear similarities: a certain space within the ethnic identity of Mossis has been used for the spread of economically dynamic activities. Cotton and vegetable cultivation, as well as cattle breeding, are possible activities because they can be undertaken without breaking with the ethnic identity of the Mossi. These activities form part of what a Mossi peasant is supposed to do. Furthermore, behind the spread of these activities there have been active proponents. The spread has not been automatic, but has depended on active promotion. In other areas, where group identity does not produce the kind of spaces we have seen here, it will be much more difficult for economically dynamic activities to spread, even with active promotion. This is an important conclusion when it comes to the question of success for economic reforms.

An alternative explanation for why cotton, cattle breeding and vegetable cultivation have become especially dynamic areas could be that the level and character of risks are different in these areas as compared to the cultivation of cereals. Even if harvests fail, even if cattle die, the food security of the household is not immediately threatened. Cereals are more important for people's survival than cattle, vegetables or cash crops. Therefore, the kind of risk that is involved in more market-oriented activities is only allowed in areas where food security is not directly affected.

It may very well be the case that risks are divided into direct and indirect categories, and that the threat of lost food security makes risk calculation take on a totally different character. This I have not studied. Hence, my knowledge is limited. But an analysis of the economic situation of a typical Mossi household, with their large dependency on the monetary economy (INSD, 2001, p 205§), shows that it would be unwise to make such a division. Loss of monetary income is no less a threat to food security than a failed cereal harvest is. And particularly in the case of failed harvests, the importance of monetary incomes increases tremendously and becomes directly related to the food security of the household. Hence, should such a notion of direct and indirect risks prevail, this would be part of a system of norms on how to behave, rather than being the result of rational calculation. A rational calculation of risks would invalidate any division between direct and indirect threats to food security.

## **7.2 Explaining Dynamic Groups**

What, then, explains the fact that certain households, or certain household members are more dynamic than others? From research on the diffusion of innovations we know that all populations contain "innovators", "early adopters", "the early majority", "the late majority" and "laggards". It could analogously be

expected that a minor share of the population would be economically dynamic, because factors such as risk aversion, creativity and other things differ between individuals. In four of the villages, Bango, Rapougouna, Zambanga and Gandaogo, I found 15 percent of the households to be economically dynamic. Could that be a reasonable share of the population given climatic and other circumstances? This is very hard to reveal, since there are no guidelines to follow. Hence, this is not a very useful explanation, since it does not reveal more than the curve of normal frequency distribution does.

In Mossi villages, people tend to define themselves as belonging to different sub-groups. Mention is often made of the categories “young”, “women” or “old”. In vegetable gardening and market oriented cattle breeding it is often young men who are the most active ones. In commercial activities it is often women who are more active. However, in the analysis in chapter 4 of factors causing income diversification and economic dynamism, it turned out that generational gaps were not a very good explanatory factor. For instance, had it been the category young men that was economically dynamic, almost all the households would be prosperous since young men are found everywhere. Therefore, any valid explanation must be more precise. However, what may still be noted is that young men are overrepresented among those who cultivate vegetables and among those who breed cattle with a clear market focus. It is reasonable to think that this is so because of the roles that are traditionally given to young men in the household give them more leeway to take on economically dynamic activities, as compared to household heads. Norms about behaviour may also play a role in this respect. Cotton cultivation is different from the other two activities, since it is household heads that control the lands on which cotton is grown. Household heads consequently make decisions about cotton cultivation.

The traditionally given roles for different actors within the household set the wider frame for action. Young men and to some extent women are freer than others to engage in vegetable growing, young men are freer to engage in market oriented cattle breeding, whereas household heads are the ones that dominate in cotton cultivation. Within this wider frame, there is scope for individual differences, depending on risk aversion and other personal characteristics.

Another factor needs to be added, however. The comparison between the villages of Bango and Rapougouna showed that the level of awareness influences the behaviour in an important way. Interventions that raise the level of awareness, that change the attitudes of peasants in important ways, contribute to increasing the level of economic dynamism. The fieldwork undertaken in this study has not focussed on separating or specifying cultural norms, individual characters and level of awareness. However, interviews as well as information from key informants show that awareness about the importance of taking initiatives is a factor that makes a real difference. This also emerged from the comparison between the villages in the central part of the Mossi Plateau and in the province of Yatenga. A combination of harsher agro-climatic conditions and higher levels of awareness explained the higher level of income diversification in the Yatenga province, as compared with the other part of the Mossi Plateau. The higher awareness stemmed at least partly from interventions aimed at influencing attitudes. In sum, then, we

may conclude that which group of individuals is more economically dynamic is decided by norms about what role different persons should play in combination with individual characteristics and the level of awareness about the importance of taking initiatives.

### **7.3 Describing Technical Change**

Another area where important differences between different groups and different areas are found is technical change in agriculture. A closer look at this issue may also shed light on the overall question of possibilities for agricultural growth.

Discussing technical change in agriculture in one of the provinces of Burkina Faso, the Yatenga, Marchal argues that not much has happened over the years. In fact, he argues that no external intervention has had any major impact on the agricultural system there during the last 60 years or so. The agricultural system in this province is a system that evolves according to its own internal forces. He observes a “regressive dynamics” in the sense that the cultivation is becoming more and more land consuming and that marginal soils are increasingly being used. Population growth, a steady subdivision of production units and the abandoning of intensive cultivation techniques where they have been applied are among the reasons behind this development, he claims (Marchal, 1982, p 63).

These processes result in decreasing numbers of trees, increased soil erosion and more frequent periods of drought. When people cultivate more marginal soils, they also reduce the periods of fallow, which used to be applied previously. But Marchal goes further than this. There are factors inherent in the agricultural system itself that may explain the way the landscape is being used. But in order to understand these dynamics, one has to see the history of agricultural systems in the area. Marchal refers to a description by Tauxier in 1917. At that time, the territory was being cultivated in crown-shaped patterns, with human settlements in the middle of the crown. In different directions from the settlement, land was being cultivated in a diversified way, with different crops put on different soil qualities. Different cultures demanded different kinds and amounts of work, and this was also mixed in a way so that family labour was being used optimally. Land was being cultivated with a mix of techniques, and fallow was practised (Ibid, p 64, referring to Tauxier, 1917).

Nowadays, this model has been abandoned, and land is being cultivated in a permanent way. Many of the different crops earlier cultivated have had to leave room for a few varieties of cereals. Among the factors that have contributed to this change, Marchal finds the following:

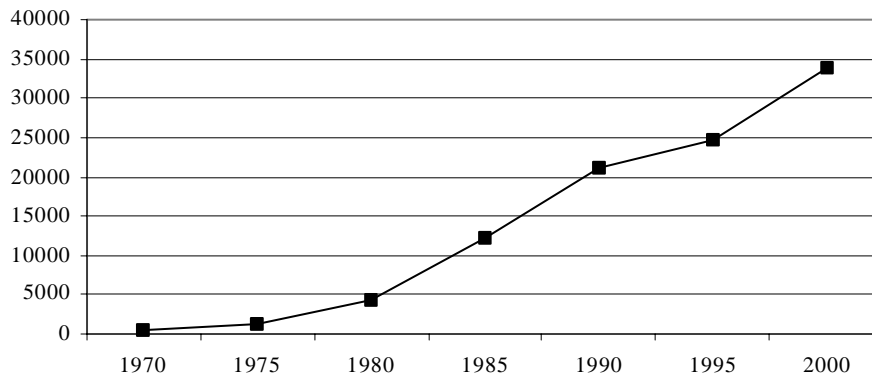
- a) A new partition of settlements due to religious gaps from the 1920s onwards. At that time, Islam started to spread, and its new adherents wanted to live separated from the animists;
- b) The imposition of an individual tax. When everyone had to start to pay taxes a process of atomisation of production units got started. Where family units of about 100 persons, and a number of different forms of collective work had prevailed, smaller households units began to emerge. The large collective fields were abandoned.

Because of this process, the large village or family fields that existed earlier were split up into smaller plots. The average plot size is nowadays about 0.2 to 0.3 hectare, and the average household unit cultivates four to five such plots, that is, a surface of 1 to 1,5 hectare. These small household units (perhaps six to eight persons) seek to control as many such small plots as possible, in order to minimise climatic risks, according to Marchal. The former system of collective management of soils has been abandoned and a system with smaller management units has taken over. These smaller units are not capable of undertaking certain intensive cultivation methods. Too much time cannot be spent on each plot, because of the need to cultivate plots with different soils and in different locations. This means that the intensive, labour demanding methods previously used on collective fields have been abandoned. Hence, people are forced to opt for a more extensive kind of cultivation (Ibid, p 65).

This means that the productivity per unit of surface (land productivity) is low, but this is compensated for by a cultivation of larger areas. It is in particular a cultivation of plots spread over different kinds of soils and topography that is sought. According to Marchal, it is the individualisation of agriculture that incites peasants to opt for an extensive kind of cultivation. It is thus the social structure, the size of the production units in combination with the climatic and natural preconditions that set the stage for the agricultural system, and hence the choice of production techniques. It is rather the atomisation of production units, than the growth of the population that is responsible for this development. Following this logic, the diffusion of ploughs and draught animals should be much easier to achieve than the diffusion of techniques that aim at intensifying the work on each given plot of land.

Now, can such claims be supported by available statistics – statistics that are found at the aggregated, national, level? In the following, I will try to analyse the level of technical change in Burkina Faso agriculture through the use of some statistical observations. First, statistics on fertilizer use indicate that this has increased substantially during the last 30 years. The table below shows total fertilizer use in Burkina Faso over the period. But this increase in use is not valid for all crops and all places. A closer look at statistics from the season 1995/96 indicates that use of these inputs is concentrated to a few cash crops and a few provinces. The total utilisation of chemical fertilizer that season was 100.4 kg/ha of NPK and 73.5 kg/ha of urea, which are the two main types of fertilizer used. More than half of the NPK used (52 percent) is spread on cotton fields, 26 percent of total NPK is used on maize, while the three major food crops, white and red sorghum and millet together receive 14 percent of the NPK used. 45 percent of the urea used is put on cotton, 39 percent on corn, while red and white sorghum and millet together receive 7 percent of the urea (Ministry of Agriculture, statistical department: "Utilisation des intrants – campagne 1995-96, tableaux 1, 3-6, 8). The pattern is clear that chemical fertilizer is mainly used on cash crops, whereas important food crops receive a tiny fraction of the total.

**Graph 7.1:** Total Fertilizer Use in Burkina Faso (tons)



Source: FAOStat, October 2003.

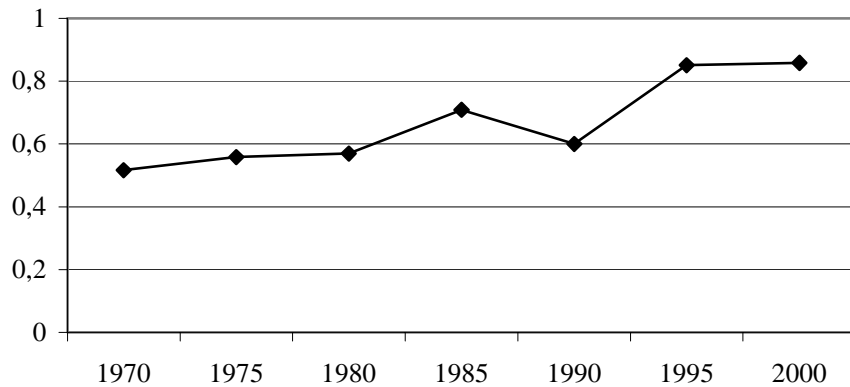
When applied to the fields, the average use of NPK in the provinces on the Mossi Plateau averages 98 kg/ha, and regarding urea 68 kg/ha. These figures are just slightly below the national averages (Ibid, tableau 3). But another way of presenting the same picture is to look at the absolute amounts of fertilizers used in the different provinces. Such a division shows that five provinces – all in the south-western part of the country – consume 85 percent of the NPK used, and 87 percent of all the urea used (INSD, 1998, p 71f).

Statistics from 1993 indicate that 83 percent of total agricultural households in the country did not have any place where they gathered compost, which indicated that they did not use compost in any systematic way on their fields. It might be assumed that many have started to use compost during the years that have elapsed since then, but the figure still gives an indication from what a low level this practice sets off. At that very same period in time, 69 percent did not own any ploughing animals (Ministry of Agriculture: “Stratégie nationale sur la mécanisation agricole – FAO/DIMA 1996, données ENSA 1993, tableau 6). We may also add that the practice of building stonewalls to hinder or counter soil erosion was practiced by 9.9 percent of the agricultural households in 1993. The conclusion drawn by INSD is that peasants show an unexpected unwillingness to change their cultural practice in spite of long periods of drought (INSD, 1998, p 77). And Fauré concludes in his study of the mechanisation of the agriculture in the cotton zone of Burkina Faso that soil management remains a major problem. Even if mechanisation increases the consumption of fertilizers, the mineral balance of the cultivation remains negative (Faure, 1994, p 13). In sum, the use of inputs in order to increase yields per unit of surface area is limited, and concerns to a large extent the cultivation of a few cash crops. The use of traction animals has been somewhat more accepted, but does also remain a matter for the minority, according to available statistics.

However, knowledge about the changing use of fertilizers, and about the existence of other technical devices at one particular point in time, do not allow us to draw conclusions about the level of technical change. More information is also needed

about the evolution of land and labour productivity, before any conclusions may be drawn.

**Graph 7.2:** Output of Cereals per Area, Burkina Faso Aggregate (tons/hectare)

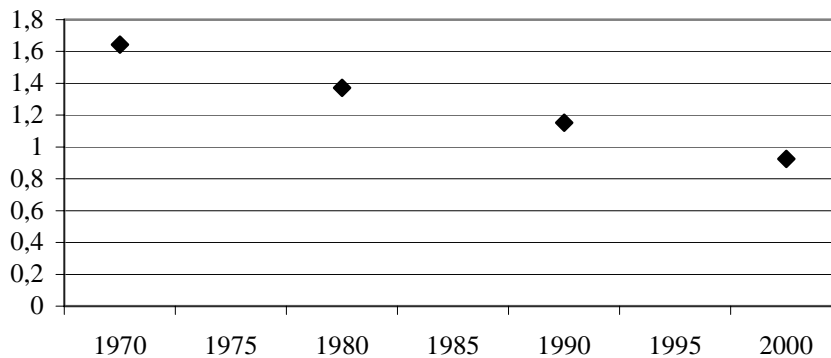


*Source: FAOStat, March 2003.*

Aggregate statistics on land productivity in the area of cereal cultivation show that this has increased quite distinctly. It is possible that this increase might be related to the increased use of fertilizer, but there are other possibilities as well. To explore these possibilities, there is a need to look also at the relationship between cultivated land and the size of the agricultural labour force. The increased use of labour per area may also increase land productivity, under certain conditions.

In chapter 1, I discussed the issue of land degradation, stating that there is a rapid process of land degradation taking place. It is, of course, not self-evident that this conclusion should be valid for all levels of aggregation, as Gray (1999) argued. But we may, nevertheless, observe a process in which the pressure on the land constantly increases, because of high population growth and the spread of agricultural production into more marginal areas. If we take a closer look at the statistics, we note that the area under cultivation has increased in Burkina Faso as a whole. But the rate of agricultural population has increased even further, leading to a decrease in the area cultivated per person active in agriculture (see graph 7.3). This could reasonably be interpreted as being a result of the increase in population.

**Graph 7.3:** Agricultural Area Cultivated per Agricultural Population (hectares)



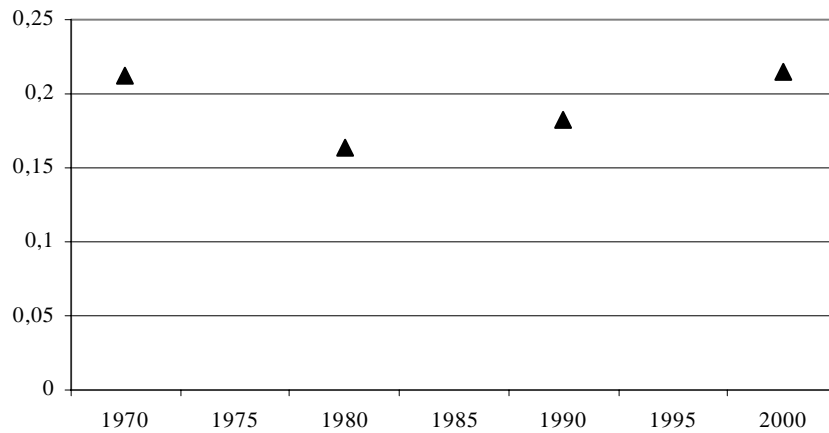
Source: FAOStat, October 2003.

We have seen (graph 7.2) that the overall land productivity in cereals production has increased during the last 30 years as measured by total production of cereals per total area cultivated. Area productivity measured at this aggregated level has increased from about 500 kg/hectare to about 850 kg/hectare, which is a considerable increase. In other words, Output (Y) per Area (A) has increased. We have also seen (graph 7.3) that, on average, an increasing number of agricultural workers are cultivating each unit of land, that is, Area per Number of agricultural worker (N) is decreasing. The statistics presented here may be seen as reasonable approximations of the theoretical relationships between the factors we deal with. A problem in that respect is that area per agricultural population is measured for the total agricultural area. However, the tendency is the same for area cultivated with cereals. Even here the area per agricultural worker is decreasing. We do also know that labour productivity, that is, output per agricultural worker, is a product of the above-mentioned relationships, and we may summarise this in the following formula:

$$\frac{Y}{N} = \frac{Y}{A} \times \frac{A}{N}$$

Since the ratio Y/A is increasing and the ratio A/N is decreasing, it is impossible to say anything about labour productivity, Y/N. However, aggregate statistics of output per agricultural population show that increase in land productivity seems to dominate over the decrease in cultivated area per worker, at least during the period after 1980, as seen in the following graph:

**Graph 7.4:** Cereal Output per Agricultural Population (ton/person)



*Source: FAOStat, October, 2003.*

What is seen in graph 7.4 is that labour productivity dropped quite substantially during the first ten years of the period, in order to start to rise again, and reach a level in year 2000 slightly above that in 1970. The interpretation we may make of this curve in combination with the statistics presented above is that during the first ten years of the period the decrease in cultivated area per worker was a stronger tendency than the increase in land productivity. However, from 1980 onwards the relationship has been the inverse, and the increase in the ratio  $Y/A$  has dominated over the decrease in the ratio  $A/N$ .

The reality behind the relationships illustrated statistically above is that the agricultural population in Burkina Faso has increased with approximately 100 percent the last 30 years, whereas cultivated land has increased by some 20 percent during the same period. More people have entered agricultural production, and both land and to some extent also labour productivity have increased. But what does that tell us about the level and character of the technical change?

Land productivity has undoubtedly increased, as seen in graph 7.2. This increase may come from the technical change associated with increased use of fertilizer. But it may also emerge from a situation where more people are working the average unit of agricultural land today, as compared with 30 years ago. However, when more people cultivate a given area of agricultural land, the outcome in terms of both labour productivity and land productivity is uncertain. At a certain stage the productivity increases, but when more workers are added, their marginal contribution to productivity will at some point be decreasing. What statistics for Burkina Faso over the last 30 years show is that the increased number of agricultural workers has been parallel to increased land productivity whereas the relations to labour productivity is less clear. Anyhow, it seems as if technical change of a land-saving character has taken place. This does not necessarily imply that such technical change has taken place at the village or at the household level



or in all different provinces of the country. So the question about the level and character of technical change on the Mossi Plateau remains unresolved.

### 7.3.1 Technical Change on The Mossi Plateau

In the village empirical material there are different situations regarding land availability. In the villages of Zambanga and Zaare, Northern Ghana, a majority of households express that they have insufficient land to cultivate. In Rapougouna, Bango and Gandaogo, the situation is the inverse, with large majorities in Gandaogo and Bango claiming that they have sufficient access to land. If we compare those households who have sufficient lands with those who have not, we find however almost no differences at all regarding the use of inputs. The use of chemical fertilizer is not correlated to the availability of lands, which we can calculate from the following table:

**Table 7.1:** Relationship Between Land and Fertilizer

	<i>Enough lands</i>	<i>Lack of lands</i>	
<i>Chem. Fertilizer</i>	28 (33.7%)	15 (31.9%)	43 (33.1%)
<i>No chem. Fertilizer</i>	55 (66.3%)	32 (68.1%)	87 (66.9%)
	83 (100%)	47 (100%)	N=130

The table contains the practices of 130 households in the five villages. We may by a simple comparison of column frequencies see that there is no correlation between these factors. A calculation of chi-square makes this even clearer:

$$\chi^2 = N(bc - ad)^2 \div (a+b)(a+c)(b+d)(c+d) \approx 0.0449$$

We find in statistical tables that the critical value for chi square at a level of significance as low as 0.1 is 2.71, which is why we safely may conclude that the null hypothesis, that there does not exist any correlation between the variables, holds up. We may instead trace distinctive patterns of behaviour in each village. In Gandaogo, where there is specialisation in cotton cultivation, the use of chemical fertilizer (52 percent of the households) is high, and directly related to this cultivation of cotton. In Zambanga, the use of chemical fertilizer is very low (11 percent), because the availability of manure is much higher there. In Zaare, the use of chemical fertilizer (47 percent of the households) is high, and directly related to the cultivation of vegetables in the dry season. In Bango there is a tendency not to use chemical fertilizer very much (23 percent of the households). While this tendency is present in Rapougouna as well, it is however less pronounced here (30 percent of the households).

The lack of any correlation between the availability of land and the use of chemical fertilizer indicates that no technical change towards intensified land use has taken place, at least not because of land scarcity. One would have expected households expressing a lack of lands to increase their use of fertilizers and other methods for increasing the yield on the lands they control. But this may not be observed.

What other kinds of technical change may have taken place in the studied villages? In all the five villages, the number of households using animal traction is larger

than the number of households using chemical fertilizer. The total distribution in our sample is that 48 percent of the households own, or regularly use, ploughs, but no chemical fertilizer. 17 percent use both a plough and chemical fertilizer, while 3 percent use only chemical fertilizer. 32 percent in the sample use neither plough, nor chemical fertilizer. Hence, it seems as if the pattern predicted by Marchal's study can be confirmed empirically. There has been a marked increase in the use of compost during the last decade. The driving force is decreasing soil fertility. But a general observation made by extension workers is problems in convincing peasants to adopt new cultivation techniques. Experienced extension workers claim that education programmes and the ability to analyse the total situation of a household are key to a successful introduction of new techniques (interviews, key informants).

The case of the 25-year old household head Nsoh in Zaare, Northern Ghana, may further illustrate the dynamics at work. While almost all other interviewees in that village claim that they lack lands, he answers in a different way. "It would not help if I got more lands: I have to work with what I've got", he says. Holding about one hectare, which is no less and no more land than other households in the village, he tries to earn money from different commercial activities, in order to buy fertilizer and other agricultural inputs. "There are maybe five other people in this village that think the way that I do", he claims. He has reflected a lot about how to improve the situation for his family and himself, and found that a more intensive cultivation of his plots available is the best strategy to follow. But this, he argues, goes against the tradition in the village. There exists a widespread preference for finding new lands to cultivate. "It is seen as an honour to cultivate large fields", is one comment. The large majority of the inhabitants tend to think that cultivating larger areas is the best solution to problems of limited harvests.

Hence, what we observe at the local level, in the villages, is not consistent with what we find at the aggregated national level. In the villages on the Mossi Plateau, we note a tendency to increase the lands under cultivation, and a preference for labour saving technical change, rather than land saving. At aggregate level, we note a process of land saving, which logically must have its foundation in some kind of technical change. Subsequently, this change takes place through the process of moving production from one province to another rather than through changes of production techniques at the individual production unit level.

## **7.4 Concluding Remarks**

It has been established in this chapter that the search for and maintenance of group identity decide what space there is for economically dynamic areas to emerge on the Mossi Plateau. Market oriented activities may be developed as long as they do not challenge prevailing norms about what it means to be a Mossi. The upkeep of the indigenous institutions described in chapter 5, and in particular the maintenance of the household as the basic production unit, furthermore set the stage for which groups and individuals that may become economically dynamic. Economic dynamism is possible, and is developing within these frames. Since the matter of being a Mossi peasant is densely impregnated by norms it takes active promotion by some kind of actor for economic dynamic activities to spread widely.

All the three dynamic activities identified in chapter 6 have been spread with the help of active promotion.

Change in techniques of cultivation has taken place in Burkina Faso as measured at aggregated national level. This change has been land saving in character. On the Mossi Plateau, however, technical change has been much slower, and to the extent that it has taken place, it has been labour saving. Even in this area prevailing norms about what it means to be a Mossi peasant are decisive for the character of change. The search for, and the upholding of an identity is a very strong force guiding human behaviour on the Mossi Plateau.



## **8. Explaining Agricultural Growth**

In the theoretical framework, chapter 2, different sets of theories were contrasted as alternative explanations of agricultural growth in Sub-Saharan Africa. On the one hand neo-classic economics was grouped together with New Institutional Economics, on the other theories belonging to the broader institutional school were put forward. In order to test these theories against the empirical material in this study, a step-by-step approach will be applied. First, a recapitulation and extension of the discussion of income diversification will be made. Then an analysis of how technical change comes about will be undertaken. Next, another sub-sector of the theories, why certain contractual forms prevail on the Mossi Plateau, will be discussed. In all of these sections the two contesting theoretical perspectives will be discussed and tested. Subsequently follows a more general discussion on the applicability of different kinds of theories about agricultural growth in Sub-Saharan Africa. In this latter section, judgements as to which kind of theory that holds up will be passed. The chapter will be concluded by discussions of the scope for change.

### **8.1 Analysis of Income Diversification**

As discussed in chapter 5, the low level of income diversification on the Mossi Plateau is explained by a reluctance to change, which in its turn depends on the prevalence of strong indigenous institutions. The centrality of social relations, the upholding of the household as the production unit, of hierarchical structures and the dominance of customary land tenure combined form a web that reinforces a traditional form of production, that serves to hinder income diversification and economic dynamism. The web is so tightly woven that it would take a great effort to exit from it if one wished to do so. But more importantly, to most Mossi peasants it does not seem worthwhile to break out of it. The characters of these indigenous institutions make them belong rather to the logic of appropriateness. It is seen as relevant and meaningful to maintain these institutions and the way of life that they imply. Sons return from periods of work migration in order to take on the role of heads of households in their villages. Trade and commerce, as well as the growing of vegetables or the breeding of cattle, are kept as side activities alongside the core activity of growing cereals.

Economic dynamism occurs, as discussed in chapter 6, where mainly women and young men are capable of undertaking profitable activities. These activities most often include vegetable gardening, cattle breeding or cotton cultivation. But these activities still form part of the customary pattern of production in the sense that the centrality of cereal cultivation or the role of the household as basic production unit are not threatened. This dynamism is not a matter of using income diversification in order to expand into new and more profitable economic activities.

There is also a long-term pressure on natural resources and a long-term development of decreasing levels of rain, as discussed in chapter 1. These developments contribute to increased income diversification, which is undertaken

in order to spread risks better (refer the first part of chapter 4). However, this long-term tendency has so far not been able to change the general pattern of low levels of income diversification on the Mossi Plateau. One might assume that the developments noted in the northern province of Yatenga may eventually also be replicated on the Mossi Plateau. Hence, the level of income diversification is still fairly low on the Mossi Plateau (refer chapter 4).

When this situation is interpreted it is the theoretical approach coming from the broader institutional perspective that is the more relevant one. The portfolio theory developed out of neo-classical micro theory is hard, or maybe even impossible, to test empirically. However, by means of reasoning we find that the logic of appropriateness is the more relevant theoretical framework. This is so since I found that reluctance to change, and the upholding of indigenous institutions, were the factors that explain the presence of income diversification. And the maintenance of these indigenous institutions needs to be understood within a logic of appropriateness in order to make sense. They are there in order to uphold a certain group identity and a certain form of life.

## **8.2 Analysis of Technical Change**

Technical change is another important sub-section of theories of agricultural growth. In chapter 7 a difference was found between the level and the character of technical change at the aggregated national level, and the villages on the Mossi Plateau. At national level, a land saving technical change was noted for the last 30 year period, whereas a labour saving technical change – if any – was found on the Mossi Plateau. How could this difference between the local and the national levels be reconciled? There are a number of possible explanations. An important aspect that I have not mentioned so far is the process of internal migration that has taken place in Burkina Faso. Over the past 30 years there has been a substantive migration from the Mossi Plateau, and from the northern provinces of the country, including Yatenga, towards the southwest. From chapter 1, it is known that the level, and predictability, of rainfall is higher in the southwest parts of the country than in the central and northern parts. We also noted (p 205) that the use of fertilizer is much higher in these parts of the country. Hence, the total increase in labour productivity noted in graph 7.4 may have been due to increased rainfall and technical change that has taken place as an integral part of the migration process. Increases in rainfall come automatically, since people move to an area where the rainfall averages are higher. Technical change may come about by the adoption of new methods at the time when migrants arrive at their new area of habitation.

Increasing levels of rainfall contribute to increasing labour productivity and so does technical change. Since these two processes are taking place at the same time it is not possible to discern which one that dominates the other. The technical change that has taken place at the national level has been land saving in character. But, even though we conclude that a land saving technical change has taken place over the long run at the aggregate level, this is not what we observe at the local level. In Mossi villages we see a continued tendency to opt for the extensive pattern of cultivation. This tendency is obviously not related to any price signals,

but could rather be understood within the logic of reducing risks in agriculture. This practice is also connected to overall habits and norms about the way agriculture should be carried out. Hence, our empirical material gives further support to the arguments of Skarstein (2002). The local dynamic at village level goes in the direction of labour saving technical change, if any, rather than land saving. This dynamic is linked to norms about how to undertake cultivation in a proper way, and about issues related to prestige, rather than being a response to price signals.

In a longer run, however, there might be land saving technical change taking place. But this is rather coming about when agricultural production is being moved from one geographical area to another, and when new production units are set up. Technical change at household level is a very slow process.

The dominant theory regarding technical change is the theory of induced innovation, and this is being applied when analysing both developed and developing countries. For instance a widely used textbook in agricultural economics such as Hayami and Ruttan (1985) uses this theory to explain both technical and institutional change in agriculture. A number of other authors have used the theory in order to analyse technical progress in underdeveloped agriculture (see e.g. Binswanger et al, 1978). Central to the theory is that differences in relative factor prices decide which character of technical change that will take place. But one of the arguments that Skarstein (2002) uses for dismissing the theory of induced innovation is that it is competition between producers, rather than price, that drives technological change. The findings in this study also support a refutation of the induced innovation theory. Skarstein does not develop the argument any further, but at the same time, he opens up for a much wider interpretation of the forces behind technological change. Competition is in its very essence a matter of social relations, where one individual wishes to be more prosperous than the other. Through the forces of competition the question of profit shifts from being a matter of absolute profit into a matter of relative profit: the most important thing is no longer to earn money, but to earn more money than the competitor.

With this shift of focus into the field of social relations, it is wide open for the explanations that Rogers (1995) and others provide. In the studied villages it makes sense to talk about “heterophily” between villagers and extension workers – who are the main agents for the introduction of new technologies in the villages. Training officers, who have worked with the introduction of ploughs for many years affirm that the understanding of the situation of the local peasant is key to the successful introduction of new techniques (interview, Bougma, March 2003).

On the Mossi Plateau there are social norms that strongly work against change. It has been observed that land tenure, the building of social relations, traditional and hierarchical power structures together with the way the central production unit, the household, functions all tend to uphold a status quo. This has a bearing also when it comes to the adoption of new techniques, to the diffusion of innovations. The degree of homophily between opinion leaders and followers is very high in villages on the Mossi Plateau. The influential leaders are most often older and less cosmopolitan than their followers. Followers have often been exposed to more

influences from outside. But household heads and village chiefs still uphold their positions as opinion leaders. The very system of political and social decision making continues to give these leaders a central role. The norm that older people in general, and authorities in particular, should be respected gives these older, less cosmopolitan people a continued role as opinion leaders.

This also means that the degree of heterophily between opinion leaders and innovators, or change agents, tends to be very great. Most often it is this gap that is not bridged when peasants reject new techniques. The stories told by agricultural extension workers, by sales agents who try to introduce new varieties, and by NGO field workers are numerous: “villagers don’t want to adopt new techniques, new varieties. It is only when they have really failed that they become ready to try something new”. Peasants are not willing to take “unnecessary” risks, they prefer to wait and see that someone else manages well in the adoption of an innovation.

It is this kind of dynamics that is taking place in villages on the Mossi Plateau. It is because of the high degree of heterophily between change agents and opinion leaders that so little change takes place in terms of the adoption of new farming techniques. The theory of induced innovation, where the price signal is thought to play a decisive role, is not valid in these villages. This theory misses the social dynamics, the causal relations that may explain the kind, and the low level of, technical change.

### **8.3 Analysis of Contractual Forms**

In the setting of agriculture on the Mossi Plateau, there are some particular contractual forms that attract our interest, because they are “non-standard” to follow the phrasing of Williamson (1979, p 246-254, 1981, p 555, 1985, p 52 ff, 1986, p 179-184, 1988, p 69 ff, 1995, p 225). That contracts are “non-standard” implies that the governance of transaction is not of the neo-classical market-conforming kind. They are rather governed in an administrative way, and belong to the category of “relational” contracts (Williamson, 1985, p 71f). If such contracts emerge in cases where transactions are frequent, uncertain and are subject to a high degree of asset specificity, it may according to the arguments of Williamson be assumed that they emerge in order to reduce transaction costs. Whether this is the case with contract types prevailing on the Mossi Plateau will now be discussed.

The first example concerns the cultivation of cereals as cash crops. Given the high level of subsistence farming on the Mossi Plateau, the planned cultivation of cereals for sale is uncommon. When it occurs, it is usually done collectively when villagers form groups for special reasons. It does happen regularly that individual households market parts of their harvests, usually in order to obtain cash for a special purpose. But this is seen as a residual activity. The households need to store enough food, and only when a food stock of sufficient size is achieved may some cereals be put aside for sale. However, in cases where cereals are cultivated only for selling, it is usually a collective undertaking. The returns from such sales are meant to serve certain objectives of the group (interviews, key informants).



When groups are formed with a certain purpose, it is usually cash crops such as cotton or peanuts that are grown in order to earn money. But from time to time it happens that even cereals are grown for this purpose. In such cases, first and foremost maize is being grown because it is easy to sell. But sometimes the red variety of sorghum is also grown. The latter is used for the brewing of the local alcoholic beverage "dolo". Concerning the contractual form, the issues to be solved are how to arrange access to land and labour, as well as the subsequent sale of the harvest. Having formed a group, the members need to negotiate access to land according to the rules of the customary land tenure system. That is, they need to contact either the land chief or the proprietor of the land. Usually, this contact is established through the co-opting of someone from the family controlling the land to become member of the group. This is catered for from the very beginning of the process of forming of the group.

The work is collectively undertaken, special hours are set aside for the work on the collective field, in accordance with traditional forms of collective work. For example in everyday life and cultivation every family has organised itself so that everyone undertakes work on the fields controlled by the family head at certain given hours. The same principles apply for work on a collective field of this kind. When the time comes for the harvest to be sold, part of it is set aside as a gift to the proprietor of the field. This is, as we have discussed above, seen as an expression of gratitude, and also a signal that the lenders are ready to submit to the hierarchy, and follow the rules involved in the land tenure system. And since information about the size of the harvest, and returns on the sale, pass through internal family information channels, the monitoring/trust part of the contractual relationship is very well catered for. Another particularity is that it is almost exclusively lands of a poorer quality that are let out to group activities of this kind.

What are then the circumstances in which this contractual form evolves? The uncertainty of the cultivation of cereals is very high, due to agro-climatic reasons. The fact that cultivation is undertaken on more marginal lands increases this uncertainty. If rains are insufficient, the risk for harvest failure is greater on marginal lands. This would support the formation of non-standard contracts in order to lower transaction costs. But regarding frequency and asset specificity we do not find high values. It is rather infrequent that groups are formed with the purpose of cultivating cereals for sale, and all the resources used may find alternative uses easily and quickly. The low values on these two latter variables constitute an argument against non-standard contractual forms.

We may very well regard the contractual relationship between the parties that are members of the group, and between members and the proprietor of the land as non-standard. We may also clearly see that the informal linkages that are established between the group and the family controlling the land provide informal information that contributes to lower transaction costs. But where does that leave us? Could it be that uncertainty alone might cause this kind of contractual relationship with a high content of hierarchies and administered governance of the allocation of resources? For the time being, we will leave that question open until we have analysed some other non-standard contractual forms found on the Mossi Plateau.

A similar contractual form - the forming of groups for the collective acquisition of productive resources - is also found in vegetable growing in areas surrounding dams. This form has been described in our discussion on vegetable growing in Korsimoro village. Here, the non-standard form of contracting concerns acquisition of land, which is arranged in a way similar to the one described above. When it comes to labour relations and marketing, we observe more standardised forms of relations, as seen from an economic perspective. Members of the groups cultivate their plots individually, and they sell their harvest individually, or at times together with other cultivators when more important clients are at hand. However, the access to land is assured through the negotiation between group leadership and the proprietors of the land. Also in this case, family links are established between group members and land proprietors.

Regarding the environment in which these kinds of contractual relationships are established, a similarity emerges with the case of cereals: the uncertainty in the cultivation of vegetables is high. This is so in spite of the fact that water is drawn from the dam. With the level of water being known at the beginning of the cultivation season, it may be established whether there will be enough water for the whole season or not. But it is nevertheless when cultivation starts that problems emerge. Vegetables are much more sensitive to lack of water, to diseases and other attacks than cereals, and they cannot be stored as long as cereals. In short, there are more risk factors associated with vegetables. Regarding the uncertainties related to market conditions these are more or less the same for vegetables as for cereals. It might be argued that the demand for cereals may be more stable than that for vegetables, but given the steady increase of demand for vegetables from within the country as well as from neighbouring countries, this difference is not accentuated. Hence, it may be established that the uncertainty involved in growing vegetables is probably larger than the one involved in growing cereals.

When it comes to issues of frequency and asset specificity, there is a higher rate of frequency involved in the vegetable cultivation since crops often need to be sold immediately as they ripen. Hence, the marketing occasions are more numerous than for cereals. Regarding asset specificity, it may be argued that the investments in motor driven pumps increase the asset specificity in vegetable cultivation somewhat. There is a need as well for know-how involved in vegetable gardening. But since so many are involved in the activity, this is not any indication of a high level of asset specificity. The special know-how is spread on many different hands, and there is no need for repeated transactions with one particular group of producers. Hence, it is a high level of uncertainty, and high levels of frequency that support the formation on non-standard contractual forms regarding the cultivation of vegetables. Asset specificity is not particularly high. But on the whole, there is more support for the NIE thesis in the area of vegetable gardening than in the growing of cereals.

Turning to the contractual relationships that concern growing and sale of cotton, a slightly different picture emerges. Here more common market relationships are established. Groups are formed also in this case, but these act more as intermediaries, since the cultivation is undertaken by separate households, loans are contracted by individuals and marketing is done on an individual basis. The

structure established is that different contracts are interlinked. These contracts are established between the company SOFITEX and individual households, represented by peasant groups. SOFITEX, in collaboration with the agricultural credit scheme, CNCA, provides inputs on credit, which are to be paid as a deduction from the total income from the cotton harvest. Earlier SOFITEX provided credits with slightly lower interest rates, but during the last few years, CNCA has taken over more of the credit provisioning (Lendres, 1992, p 22). When it comes to marketing, SOFITEX remains the sole buyer on the market. The role of the peasant group is to receive inputs from SOFITEX and to distribute them according to the different reservations made by each peasant. Furthermore, the group needs to keep track of credits taken and incomes received from harvests, and subsequently distribute these amongst its members (Ibid, p 27).

The uncertainty involved in cotton cultivation is at the same level as the one regarding cereal cultivation. A steady decrease in soil quality due to climatic factors, and the exploitative character of the cultivation add to the uncertainty. And, as we have established in the case of cotton cultivation in Gandaogo, about 20 percent of the peasants cultivating cotton fail every year, possibly due to unforeseen events. The level of uncertainty must therefore be seen as quite high.

The level of frequency is not high, since the cultivation cycle is quite long, and since it is not possible to harvest more than once every year. Regarding asset specificity, there are some special machines involved, which SOFITEX own. But this may still not be seen as too high an asset specificity, since the availability of cotton is quite large also in neighbouring countries. SOFITEX needs not be totally dependent on the Burkinabé peasants. There are alternative options. Summing up these different observations, we may conclude that the level of uncertainty is high, while the levels of asset specificity and frequency are relatively low in the cultivation and sale of cotton. In total, the arguments in favour of non-standard contractual forms are not particularly strong in the case of cotton, at least not when compared with vegetable gardening.

However, with the arrangements prevailing in cotton cultivation, risks are to some extent shared between the peasants and SOFITEX/CNCA. Peasants of course bear the largest part of the risk of harvest failure, but the fact that inputs are obtained on credit leaves them a margin for manoeuvre, if problems arrive. This form of contractual relationship also provides for a reduction in transaction costs through the inter-linkage of different activities. Difficulties in monitoring are lowered through this interconnection between credit provisioning and marketing of the cotton harvest. It is thus a contractual relationship that actually decreases transaction costs.

Hence, it seems as if the NIE analysis actually would have been able to explain something in the area of cotton cultivation. The inter-linkage of contracts may be seen as a mechanism that lowers transaction costs. But the paradox is that it has just been concluded that the circumstances do not particularly call for such contracts in this case. Of course, the level of uncertainty is very high. But would that alone be able to explain the non-standard contractual form? Is this then why non-standard contractual forms also emerge in the area of cotton cultivation? Due to methodological reasons it would be preferable to leave the question open. There

has not been any variation in the dependent variable. So far no cases with standard contractual forms have been observed. Therefore no argument about the counterfactual situation has been developed. But it still seems probable that the NIE theory has a contribution to make in the area of cotton cultivation.

The contracts involved in cattle breeding have been discussed in chapter 6. However, they have hitherto not been analysed with the tools provided by the NIE. In order to make the difference in contracts more obvious, cattle breeding on the Mossi Plateau will be treated as two different cases of contractual forms. One case – the original division of work between Mossi and Peuhl – is seen as a non-standard contract. The new relationship is seen as a standard contractual form. The level of uncertainty in cattle breeding is possibly as high as the uncertainty in crop cultivation. Animals get sick and die, pasture and drinking water are lacking when rains fail, and theft of cattle may occur. The frequency of exchange relations is not very high, but at least higher than the frequencies involved in crop cultivation and sale. Asset specificity is higher than in the other cases discussed here, because the Peuhl ethnic group have invested heavily in the building of knowledge about cattle breeding: how to do it, where to go to find fodder and water, how to deal with illnesses etc. In the case resulting in the standard contractual form, this high level of asset specificity is absent, since the peuhl are no longer involved.

Such an analysis leads to the conclusion that the arguments for a non-standard contractual relationship are stronger within the area of cattle breeding than in the other areas treated. Yet a change including a move away from non-standard contracts towards more standardised ones is actually taking place. How can this be interpreted? The immediate answer provided by the people involved is to argue that levels of trust have fallen. Hence, it should mean that the lowering of transaction costs through the establishment of the particular contract between Mossis and Peuhl is no longer as efficient as it used to be. It is possible that the search for low transaction costs leads away from a contractual relationship that no longer serves its purpose properly. If so, the changes behind this fall in trust need to be understood.

Following Robertson (1987), Dorward et al argue that different contractual forms may be seen in a lifecycle context, where the build up of trust between parties opens a space for more complex contractual forms to develop over time (Dorward et al, 1998, p 27). But in the Zambanga village there is a systemic shift in contractual forms taking place. The shift is not limited to individual households or parties, but takes place in broader sectors of the society. This is indicated by the fact that the same kind of shift is ongoing both in Zambanga and in Bango in Yatenga province. Furthermore, the shift goes in a direction of decreasing levels of trust.

If applying the analytical scheme for understanding trust, developed by Tillmar (2002) on the basis of the works of Sztompka, it is noted that the decreasing level of trust in Zambanga is related to a shift from a situation where indigenous norms and institutions have supplied the reasons for trust into a situation where formal institutions ought to have taken over. What Tillmar calls “hostage”, that is people being caught by their mutual dependency on indigenous institutions, should have been replaced by “sanction”, the punishing system that formal institutions ought to

provide (Tillmar, 2002, p 287f). But the more market-oriented setting, into which peasants have been pushed and pulled, does not provide sufficient sanctions to uphold the old level of trust. Hence the level of trust has been decreasing in Zambanga.

But this is not a sufficient explanation for the move from Mossi-Peuhi cattle contracts into the situation where Mossis keep their cattle themselves. Another factor is the need for more manure to put on the fields, in order to meet challenges of soil degradation. There is a need to widen the analysis and take a broader perspective of insurance and food security into consideration. What has been observed is that climatic changes have made living conditions more difficult in the village. This translates into a push factor towards another form of cattle breeding where the manure may be better used for improving soil fertility. At the same time increased commercialisation and greater opportunities in cattle trading constitute a pull factor into new forms of cattle breeding. Earlier it was argued that changes in household relations within Mossi households work in the same direction of contractual change. Hence, it is a number of factors that may jointly explain this change.

### 8.3.1 Explaining The Non-standard

Now to the more general question of which factors cause the establishment of non-standard contractual forms. Could it be the case that the presence of high levels of uncertainty, of frequency and of asset-specificity leads to the emergence of non-standard kinds of contracts? This is at the same time a test of the thesis that non-standard contracts are established with the aim of reducing transaction costs. The sample is very limited, since only five cases have been studied: contract forms related to cereal cultivation, to vegetable growing, to cotton growing and to cattle breeding (two different forms). But what has been established in these five cases is that non-standard contractual forms occur in four of them.

**Table 8.1:** Analysis of Non-standard Contractual Forms

	<b>Cereals</b>	<b>Vegetables</b>	<b>Cotton</b>	<b>Cattle I</b>	<b>Cattle II</b>
<b>Uncertainty</b>	High	High	High	High	High
<b>Frequency</b>	Low	High	Low	Low	Low
<b>Asset specificity</b>	Low	Low	Low	High	High
	Non-standard	Non-standard	Non-standard	Non-standard	Standard

Following this table, it would seem as if only one of the three criteria proposed by Williamson would suffice in order for a non-standard contractual form to emerge. This is contrary to his own reasoning, since he discussed even more precisely the different combinations of uncertainty, frequency and asset specificity. It was only in those cases where uncertainty and frequency were high, and asset specificity took on medium or high values that non-standard contracts were to emerge, according to him. As the discussion above has indicated, there might therefore be a broader background to the development of non-standard contractual forms at the Mossi Plateau. Other factors may be at play as well, relating to issues of norms and

tradition. This would especially be plausible in the cases where only one out of three criteria obtains high values, which is the case with the growing of cotton and cereals. In vegetable gardening and cattle breeding, it makes more sense to interpret the contractual forms as tools used in order to lower transaction costs. The case of cattle breeding might be a situation where there is a search for new and more efficient contractual forms, which means that a non-standard form of contracts is being abandoned.

In the case of vegetable gardening both frequency and uncertainty call for non-standard contractual forms. However, even with such an interpretation it appears as if many things are left out in the analysis: for instance relational aspects regarding the upholding of land tenure regimes, adherence to local power hierarchies in the formation of groups for cultivation, and the upholding of links within and between household units when forming organisations to cultivate. The discussion in chapter 6 on why cultivation was undertaken in groups, why varieties to cultivate were not chosen freely, and why land was lent and not rented showed that a broader spectrum of factors was decisive in the selection of contractual forms. Similar arguments may be forwarded in the case of cattle breeding. So, even if we have tried to interpret things as positively as possible seen from the perspective of the NIE, we have to conclude that the search for lower transaction costs is insufficient for explaining the practice of non-standard contractual forms on the Mossi Plateau. The explanation needs to be sought in a broader range of factors. Hence, more sociologically oriented theories, where institutions are formed for other purposes than resolving collective action problems related to the functioning of markets, are better at explaining the contractual forms that appear on the Mossi Plateau.

However, within this broader setting, where indigenous institutions as discussed in chapter 5, have a strong influence over production decisions also, there are nuances to be found. There is more to the argument about searching for lower transaction costs in some activities as compared to others. In the more dynamic activities there might be stronger reason to move to new contractual forms, and to find contracts that lower transaction costs. The changes undertaken in cattle breeding may be seen from such a perspective. To abandon a previously functioning contractual form might be necessary given that transaction costs change in character with levels of trust decreasing, and reasons for distrust taking on new shapes.

A comparison of contractual forms between the more traditional Korsimoro and the more market exposed Loumbila also indicates that there is a change in contractual forms taking place. Groups are less influential in Loumbila and access to land is slightly more guided by market oriented relations.

In sum, a broad range of factors related to indigenous institutions, norms and customs best explains those non-standard contractual forms that prevail on the Mossi Plateau. However, in the economically more dynamic activities, and especially in areas with better market access, contractual forms that are more conforming to markets tend to emerge. In these areas the search for a reduction in transaction costs becomes a more plausible explanation as to why non-standard contractual forms prevail. The different theoretical positions that are dealt with in this study are therefore not totally mutually exclusive. Even if indigenous

institutions dominate the economic behaviour of peasants, there is scope for economically dynamic behaviour as well.

#### **8.4 Analysis of Theories About Agricultural Growth**

We have so far found that income diversification, the level and character of technical change and the character of contracts prevailing on the Mossi Plateau are all best explained by theories belonging to the broader institutional perspective. Moving to the broader issue of agricultural development, the discussion in chapters 4-6 showed that the indigenous institutions that were discerned basically act as hindrances to both income diversification and to economic dynamism. These institutions were identified as the need to uphold social relations, the need to adhere to the customary form of land distribution and thus relating to land, the need to stick to a certain form of household structure as a basic production unit and the need to uphold and respect local power hierarchies in the villages. That is the basic pattern. However, in the villages on the Mossi Plateau, of Gandaogo, Zambanga, Korsimoro and Loumbila, there exist activities of great economic dynamism, where these institutions are not holding dynamism back. These activities were identified as cattle breeding, the growing of cotton and vegetable gardening.

Even within the realm of these latter activities, these institutions still have some hold. But it is much less pronounced than in the core activity of Mossi peasants: the cultivation of cereals. Another important observation relates to the intra-household dynamics. Most often it is younger brothers, sons and women that are the more economically active in side activities. The picture that emerges is that household heads are the ones upholding the traditional pattern of cultivation, which is heavily guided by indigenous institutions. At the same time younger male members of the household and women are overrepresented among the more economically active. This they may be because their traditional roles in the household give them more leeway.

Under the influence of increasing individualism, of increasing commercialisation and possibly also increasing pressure to undertake work migration, this social process is reinforced. The upholding of the customary household structure becomes increasingly difficult, and the degrees of freedom for individual household members are increasing. However, there are at the same time strong forces working in the opposite direction, maintaining the household around the core activity of cultivating cereals.

In sum, there is a core in which indigenous institutions continue to have a hold over Mossi peasants. Income diversification and economic dynamism are spreading, but they are still secondary phenomena, undertaken when the core activities leave space, and by people that are free to escape some of the core responsibilities of the household. But what does this then mean in terms of theories?

In chapter 2, the debate on income diversification was linked to the broader debate on agricultural growth. The aspects that bound them together were the character and function of institutions that guide the behaviour of people in the two settings.

A distinction was made between market-oriented institutions and indigenous institutions regulating other aspects than market exchange. The reason given for the lack of agricultural growth, by the theories arguing that market oriented institutions exist, is that these institutions are not functioning well. This is reflected in the boxes on the market institution side labelled as “not functioning institutions” and the boxes on the indigenous institution side as “strong but wrong institutions” (Refer to Figure 2.1).

On another level a distinction was made between rules that are regulative and rules that are constitutive in their character. When it comes to neo-classical or new institutional economics, however, such a classification becomes a contradiction, because institutions in mainstream economics are thought to have precisely a regulating role. Consequently, the fourth box in figure 2.1 (the combination of not functioning institutions and constitutive rules) does not have any content. In the thinking of mainstream economics, preferences of market actors are assumed to be exogenous to the model, that is, given beforehand. However, by presenting the categorisation the way I did, I managed to illustrate the links between the debate on agricultural growth and on income diversification in a clearer way.

Hence, the links between the debates are that regulative rules are paralleled by a logic of consequentialism, whereas constitutive rules are paralleled by a logic of appropriateness. These links make it possible to conclude that agricultural growth on the Mossi Plateau is best explained by theories based on the broader institutional perspective.

Having explained why peasants on the Mossi Plateau opt for diversifying their income sources, and what theoretical framework may explain the lack of economic dynamism in this setting, backward links to the issues of logic of consequentialism and logic of appropriateness may be made. It is clear that the explanation provided is situated in the realm of the logic of appropriateness. The existence of non-standard contractual forms was not primarily explained by the search for lower transaction costs. They should rather be explained by factors that may be found deeper in the cosmology of villagers, in their relationship to the land, and in their upholding of social relations.

Also the way technical change may be understood centres around the upholding of norms that are basically meant to hold the society together. Here it could be debated whether the search for extensive cultivation of lands is a strategy aimed at decreasing risks, hence belonging to the logic of consequentialism, or induced by custom. But the reluctance to adopt technical changes is of such a character that it may not be explained as a risk-reducing strategy only. This reluctance is rooted as well in the willingness to maintain social relations and keep to a traditional way of cultivation.

However, having drawn these conclusions it is important to add that market oriented institutions and indigenous institutions exist together. The character of the economy on the Mossi Plateau is a mixed economy, in the sense that market institutions co-exist with indigenous institutions. This kind of economy is what Mazzucato and Niemeijer (2000) have termed a “cultural economy”. The fact that both these kinds of institutions co-exist means that we cannot and will not exclude



either of the two sides. Hence, when it comes to peasant income diversification, we may see that it may both be driven by the search for local niche markets and for lateral circulation, as well as by a search for safety, in a setting where safety rests with cultural patterns. And when it comes to agricultural growth, adherence to what has been referred to as “hindering” institutions exists at the same time as new, more dynamic market behaviour is introduced.

It may be seen as well that economic incentives still play a role in the lives of Mossi farmers. There is no such thing as either/or. Within the frame of the logic of appropriateness, within the frame of constitutive rules, there is also scope for the search for profit. Cattle breeders shift to breeding bulls instead of cows, vegetable gardeners try to obtain the best possible price for their products, cotton growers try to make as much money as possible. But the important thing is that this search for increased profit is undertaken within a larger framework set by norms and rules about how to undertake production and how to behave in order to uphold the larger societal systems. The conclusion is that the logic of consequentialism needs to give room to the logic of appropriateness, as the basic guiding principle for peasants’ decision making. Hence the rules that mainly influence the behaviour in Mossi agriculture are constitutive rather than regulative. However, the fact that regulative and constitutive rules co-exist forces us to question the analytical tool used in the study. The distinction made between regulative and constitutive rules was useful, and served the role of filtering out the dominant form – the constitutive rules. But the model should not be pushed too hard onto the empirical material. In order to reach a deeper understanding, a more nuanced theoretical apparatus is needed.

#### *8.4.1 Refutation of Theories*

Which theories are then the ones that hold up, and which ones need to be abandoned and replaced? First, a conclusion may be drawn about the presence and importance of institutions in general, and indigenous institutions in particular. There are norms, values and rules that to a very large extent determine the lives and activities of Mossi peasants. Their internalised frame of action determines the possibilities of searching for new solutions and testing strategies, tools and products that have not been tried before. The whole discussion on the importance of institutions implies that neo-classical economic theories, which are not understood as embedded in the local society, must be refuted. In our sample of theories, the version presented by the World Bank in its 1994 report, representing the neo-classical tradition, must thus be refuted since price is not of great importance in explaining the behaviour of Mossi peasants. Further, the logic of appropriateness that is found, and the fact that preferences and values are formed and upheld through a social process, are not consistent with the logic of consequentialism that underpins the World Bank theory. States may be exploitative, but there are other, more important reasons why peasants act the way they do than responding to taxation and other government-imposed hindrances. Mossi peasants are not captured to that extent.

During the discussion about contractual forms and technical change it appeared that the New Institutional Economics is better at explaining the results obtained in this study than the pure neo-classical theories. This holds up also in the broader

discussion on agricultural growth. However, there are limits also to the explanations provided by the NIE theories. They are relevant to some extent. But they are not able to grasp the richness of the empirical results. There are always some aspects that remain un-explained. Institutions are to some extent fulfilling the role of decreasing transaction costs and hence increasing efficiency. In some areas, where market development has had some successes, and individualisation is gaining pace, these theories are quite relevant. But when indigenous institutions still have a stronghold, the NIE explanations are not convincing. There is a need to go beyond these theories in order to understand the fundamental dynamics that take place. What was said about the logic of consequentialism above is valid also for this theory, which in our study has been represented by Dorward et al. Hence, we need to move on to the theories that build on the assumption that indigenous institutions are affecting development in some way or another.<sup>4</sup>

The hypothesis developed by Mamdani (1996) focuses on land tenure regimes and local power structures as hindering elements for development of peasant economies. Such issues have also in this study been identified as some of the issues at the core of peasant economic behaviour. The mechanism for the captivity of peasants that Mamdani identifies is the colonial legacy of an authoritarian local power structure. My interpretation of Mamdani is that this colonial legacy is influential through two distinct channels: the first is the actual power that rests with the chiefs to allocate land, but also other productive resources, the second is the mentality of subordination that colonialism has created among peasants.

This hypothesis would, if confirmed, imply that peasants would try the best they could to be as self-reliant as possible, to try to escape all the risks of being exposed to the power of the chief. There is, of course, a possibility that the power structure is so refined and all pervasive that the best strategy would still be to cooperate, in order to have access to necessary productive resources. But the character of the local power structures, as discussed in chapter 5, is not that hegemonic. There are exit options for at least some people, on some occasions that they do not use: migrant workers are actively returning to their households and villages, young people are through side activities building up resources that they later invest in agriculture, agriculture is seen as a matter of identity as well as a form of livelihood.

The power structure in Mossi villages is rather built around mutual exchange, than a pure pattern of subordination. Gerard Ancy (1983) discussed the dual character of the Mossi society: it is both hierarchic and egalitarian at the same time,

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<sup>4</sup> The description of broader institutional theories in chapter 2 started with a discussion of Polanyi's idea that an institutional arrangement guide what form of integration that is dominating in a society. On the Mossi Plateau I have found all the institutional arrangements he discussed to be present: central nodes in the forms of chief systems and patron-client relationships; symmetrical groups in the forms of families and kinship groups; and price-making mechanisms. In such a situation his theory loses much of its ability to explain or predict. How could reciprocity, redistribution and exchange co-exist? Would not one institutional arrangement dominate over the others? What are the conditions for shifts from one institutional arrangement to another? Here it should be noted that his theory was developed in order to discuss developments in market societies. The descriptions he made of "tribal" societies were done in order to prove that exchange has never been the only form of integration known to mankind. Hence, his theory was never meant to be a theory for societies where different institutional arrangements co-exist. Therefore, we need to move to other theories to discuss developments on the Mossi Plateau.

depending on which aspects are studied and how. This is not consistent with the hypothesis of Mamdani. Taking this issue a bit further, it could be argued that the Mossi society has not been deeply penetrated by colonialism. The chief system remains fairly intact in spite of the influences of colonialism. The system remains with a great deal of legitimacy in the eyes of the majority. The stability of the system comes rather from its legitimacy, rather than from an authoritarian pressure from above.

Albeit focussing on central themes, Mamdani's theory does not help us understand what is happening on the Mossi Plateau. The main problem with his theory is that he assumes a logic of consequentialism, whereas Mossi peasant behaviour is more guided by a search for identity, and thus by a logic of appropriateness. Mamdani thus tends to fall in the same category as the World Bank, Dorward et al and others who unrealistically assume that there exists a natural state of functioning markets, which would be unleashed if only hindrances for them to unfold were taken away. Hence, his theory must also be refuted.

Sara Berry also deals with factors identified as absolutely essential for the behaviour of Mossi peasants: the central role of social relations and land tenure. She also discusses indirectly the issue of local power structures through her descriptions of how the negotiation game functions, and how the more influential people are gaining the upper hand in these processes.

Could it be that she is right in that uncertainty is a driving force behind income diversification? If everything was uncertain would not the best possible strategy be to keep as many options open as possible? Her position may be described as saying that full rationality is impossible, since information is always lacking, but that process rationality in the form of diversification, keeping as many options as possible open, is what is applicable. If one extrapolates her argument and makes a benevolent interpretation, her position may be seen as one in which actors are playing repeated games against each other in a situation of lack of information. Berry herself does not discuss in these terms, but there are clear similarities. We may recall that in one tradition of game theory it has been found that repeated games lead to the build-up of mutual links, of collaboration (Axelrod, 1984, 1997, Ostrom, 1990, p 7ff). Might this be what we see on the Mossi Plateau – the intense collaboration and maintaining of social bonds, in spite of the fact that everyone repeats that the level of mutual trust is very low in the Mossi society?

Such a hypothesis is in fact consistent with the finding that it is a low reluctance to change that leads to income diversification. If income diversification was seen in terms of process rationality, it would be those that are open-minded and searching for new ways forward that are most inclined to diversify – as it is on the Mossi Plateau. But this conclusion leads to another question: How should then the majority, those who are not diversifying, those who show a high reluctance to change, be understood? Our conclusion that a majority of peasants are following the logic of appropriateness stands out in contrast to the position of Berry, which was earlier classified as being in the realm of a logic of consequentialism. This majority is not keeping all the options open, they are not applying the process rationality that they could have done. They are still putting high emphasis on

keeping up social relations. Hence, there must be another reason why this majority stick to the maintaining of social relations.

There is another reason as well why Berry's line of argument is not fully convincing. When analysing the importance of intra-household relations, the picture of income diversification changes. The fragmented character of the household as an economic unit leads to the conclusion that some household members are more oriented towards process rationality than others. Household heads are more inclined to stick to a more traditional form of production, of economic decisions than their younger brothers for example. This is the case even if these household heads were previously younger brothers themselves, who were undertaking work migration and getting many new impressions and learning new things. There is clearly in the Mossi society a pressure to maintain traditional forms of production. The widespread reluctance to change is clearly related to the upkeep of a Mossi identity. The search for belonging to groups and structures may not fundamentally be explained in terms of process rationality. The theory of Sara Berry must therefore also be refuted.

Göran Hydén has developed another hypothesis. According to him, a logic of appropriateness is prevalent, and this logic of appropriateness is relevant for the household level, rather than for the village level, as in Seppälä's version. However, on a closer look it appears as if Hydén's hypothesis is developed more as a counterweight to a capitalist development model than according to its own premises. He contrasts the capitalist mode of production with the "peasant mode of production" – the "economy of affection" (Hydén, 1980, p 18).

So, even if he describes the economy of affection as driven by ties of kinship, residence, friendship or religion, he still sees it fundamentally as a mode of economic re-production. The uncaptured peasant (which he later modified to be "relatively autonomous and uncaptured, compared to peasants in other parts of the world" (Hydén and Peters, 1991, p 304f)) employs an economically rational strategy in avoiding the demands posed by a macroeconomic system comprising the market and the state (Hydén, 1983, p 25). In this argument he lines up with Sara Berry who claimed that keeping social relations alive and maintaining positions in kinship, community or religious networks is a strategy that pays off in the long run (Hydén, 1980, p 18f).

We may argue with Seppälä that Hydén describes the economy of affection as the opposite of an abstract market principle, which is devoid of any social context (Seppälä, 1998a, p 184). But an overriding argument in Hydén's work, as in the perspective of Seppälä, is that all markets are formed by the social relationships that impinge on them. This would arguably imply that the pure forms discussed by Hydén do not exist in reality – neither the pure market, nor the economy completely impregnated by kinship and other affectionate bonds. As Seppälä argues, cultural capital always makes inroads into the economy (Ibid). Mazzucato and Niemeijer (2000) also argue that the peasant production observed in Burkina Faso should be described as a cultural economy. They find that the rural population is clearly integrated into the market, and into the governmental system, to some extent. Hence, their argument is easier to accept, because the peasant economy is both adapting to normal market structures as well as to fully vital indigenous

institutions. There is a continuum between the two institutional set-ups, and they exist in parallel.

Another part of the argument provided by Hydén is that African rural societies are characterised by the absence of class, or other structural, conflicts. Furthermore, there are no backward or forward linkages in the economy of affection, since the technology that peasants use is so rudimentary. Hence, peasants are not dependent on outside actors for their reproduction (Hydén and Peters, 1991, p 304f). As long as a free, small-scale, and communal ownership of land is prevalent, the African peasant mode of production remains pre-capitalist, he claims (Hydén, 1985, p 22). In feudal or capitalist societies the rules are exploiting the very production process. In such societies, the state is structurally tied to the economy. However, in the economy of affection there are no such exploitative links, and the African states are consequently hanging in the air, without being integrated into this mode of production. The exploitation that takes place comes through a taxation of a surplus that is already produced by peasants (Ibid, p 23). Hence, it is rather the peasants that have a hold on the state, because of their ability to “exit” out of the system (Hydén 1980, p 25).

The Mossi society, with its long history of a ruling class living on the surplus provided by peasants, pushes this hypothesis to the brink. In this society there are, since hundreds of years back, in-built structural conflicts. However, the economy in the Mossi society may very well be analysed along the lines of kinship relations and networks built on residential, religious or friendship bonds. The characteristic traits of an “economy of affection” are there in spite of the in-built structural conflicts in the Mossi society. Furthermore, the peasants are to a large extent integrated into the macro-economic system, both through their dependency on the market, and through their subordination under the chief system, and the state.

Mamdani is therefore correct in his critique of Hydén when he claims that peasants are not un-captured, and that the “exit” option is over-valued (Mamdani, 1985, p 82ff).

But Mamdani does, on the other hand, exaggerate the degree to which the peasants are captured through forced labour, scarcity of implements and local power structures. The problem with both Mamdani and Hydén is that they regard material factors to be the absolute driving force behind economic behaviour. The presence of institutions that have developed because of other reasons than purely economic – but which nevertheless influence economic behaviour – imply that other factors than purely material ones also have a say in economic decision making.

On one hand, Pekka Seppälä claimed that income diversification should be seen as an economically rational strategy. But on the other hand, he placed it in a broader social process of “negotiated development” where a series of encounters shape power relationships, social identities and patterns of preferences. This might be a way of dealing with the dichotomy that lies in the background of the discussion whether peasants are rational or not. If rationality is contextualised in this way, and if a social interplay is seen as the process through which values are formed, such a dichotomy may be overruled.

Seppälä also argued that diversification had its driving force in a search for a cultural identity at village, or collective level. It might be possible to develop such an argument from the south-eastern Tanzanian setting, where the pressure on local communities was very strong during the years of forced villagisation, however without villages being split up and regrouped. However, on the Mossi Plateau in Burkina Faso it is those who do *not* diversify their income sources that are most interested in maintaining the local cultural identity. It is those displaying the lowest reluctance to change, the lowest interest in keeping cultural traditions, who are diversifying the most. Hence, we find a situation that is the opposite of what Seppälä found in Tanzania. This part of his hypothesis must therefore be refuted on the Mossi Plateau.

The perspective through which diversification constitutes a strategy in relation to continuous encounters between different social groups is more in line with the empirical material from the Mossi Plateau. The logic of appropriateness found to be dominating goes hand in hand with such social processes. To relate becomes more important than to stick to a given value frame. From this angle, the diversification theory developed by Seppälä has a lot to offer as a tool for also understanding the Mossi peasant economy. But it should not be taken at face value, as discussed above.

Such an argument may be taken even further by using the concepts developed by Bourdieu. Translated into the Mossi reality the “symbolic economy” takes the form of investments in relations, in holding prestigious positions within the society, but also in investments in cattle, which are seen as a sign of prosperity. The “rich” people are in a position of being able to help others, and are in that sense, “rich” in relations as well as materially. Younger brothers may be more prosperous in the material economy, earning more money through work migration, petty commerce and other things. But power and prestige nevertheless follow those who control the symbolic capital and, as discussed in chapter 5, also control access to land. We may, with Bourdieu, regard these continued processes in terms of recognition of symbolic capital, and a parallel misrecognition of economic capital. By using his tools of analysis we argue that both fields are still important, in that they reinforce each other. One is not possible without the other. But they should nevertheless be seen as distinct fields with their distinct interests prevailing.

More importantly, it is through a process of social interaction that actual peasant strategies are being formed. It is in this process that values are shaped and upheld and preferences formed. This process may in Sara Berry and Pekka Seppälä’s terms be described as a process of “negotiated development”.

Another conclusion is that in order to understand the peasant economy in villages on the Mossi Plateau, there is a need to understand which societal norms are prevailing, and are influencing the economically important decisions that peasants make. Such a position has much in common with classical institutional economics or possibly economic sociology. Each economy needs to be understood on its own premises. There are certain rules of the game, certain institutions, that are particular for every economy since the economy is embedded in the society in which it functions.

## 8.5 The Scope for Agency

By arguing that constitutive rules and the logic of appropriateness are dominant on the Mossi Plateau, I expose myself to another difficulty that, however, may be tackled by Bourdieu's tools. Is it an over-socialised theory that I am promoting? I have concluded that constitutive rules and a logic of appropriateness are dominating: Hence, one would tend to think that individuals are not capable of placing themselves outside the societal system, that they are bound by these rules, since the rules are internalised. No individuality would be possible if the individual is being created by the very upholding of these rules. Furthermore, it has been noted that change is underway in certain areas: cotton cultivation, cattle breeding and vegetable gardening in particular. But it has also been noted that there are limits to change even in these three dynamic areas. And these limits to change are, as discussed in chapters 6 and 7, compatible with the theoretical framework used. What is needed now is to reformulate the question and ask how it can be explained that change and economic dynamism are possible at all, given the explanation of the Mossi society that we have provided so far. Institutional theory is good at explaining status quo, but less capable of explaining change.

The habitus concept of Bourdieu provides a fresh perspective in relation to questions that have reappeared throughout: Why is it that young men returning from migratory agricultural work in Ivory Coast and other places do not introduce the methods they have learned in other settings, in terms of e.g. cultivating practices or contractual forms? Why is it that customary forms of land tenure are upheld, even in places where land is taking on an increasing market value? Why is it that the introduction of new, more adapted crop varieties is usually such a slow process?

What the habitus concept implies is that all these aspects are still the result of active, calculated decisions undertaken by individuals. Individuals are still the agents, acting in accordance with their predispositions, their tendencies, that stem from the experiences they have gained earlier in their lives. They construct their own horizons, and decide their own limits, and they act within those. To have witnessed other possibilities, other ways of doing things in other settings is not the same as seeing the possibilities of realising them in their own society.

The work of Pierre-Joseph Laurent is illustrative in this sense. His whole story is about what happens when new ideas are being introduced. Some young members of Kulkinka village on the Mossi Plateau return and start to develop things the "other way", that is, the way they have learned while being exposed to other settings. A number of changes occur, but it soon becomes obvious that the new things are being transformed, and adapted, to local customs. For instance, the whole system of foreign organisations financing development is being interpreted with reference to the Mossi tradition of giving gifts in a conscious and calculated way (Laurent, 1998, p 141f). A financing organisation has to be invited to the village and be given a gift, in order for a fruitful collaboration to get started. This gift is aimed at creating links of reciprocity (Ibid, p 261ff). And in order to make things happen, these young leaders have to present the new ways in a customary shape, they need to present new methods, new organisational forms in such a way

that they build on customary structures in order for them to be understood and accepted. Even the concept of development creates fear. Hence, in order to be introduced it has to be presented in tandem with a concept of mutuality and understanding, wum taaba (Ibid, p 243).

The history of the Naam groups and the 6S-movement tells a similar story. This movement of peasant associations got started in response to the widespread droughts that occurred in the 1970s and early 1980s. In the northern and central parts of the country, peasants started to organise themselves in village groups. They did this under the slogan “to engage oneself in order to deal with the dry season in the Sahel”. The initiators thought that in order to make things happen in the villages, methods and organisational principles that built on tradition and broad popular participation had to be found. A starting point for the organisation was that in the province of Yatenga “power reigns but customs govern” (Lédéa Ouédraogo, B. 1990, 24-27, 95). This confirms that indigenous institutions have a very strong position in the Mossi society. Unfortunately, the customs upon which the organisation built its strategies of change also included strong hierarchical components. So when the strongman decided to move and do other things, the major part of the movement fell down.

In this study the empirical material that concerns Mossi organisations points in the same direction. Organisation A is perhaps the most obvious example of a structure that combines the customary way of organising things with new methods, new ideas. Education in land and water saving cultivation techniques was done in the form of a *sosoaga*, a customary form for collective work to the benefit of a collective or an individual. One of the main reasons for participating in a *sosoaga* is to avoid being seen as *asocial* (Lédéa Ouédraogo, 1990, p 41). New techniques were being introduced, while work was undertaken with the aim of establishing and strengthening the ties between the parties involved, in order to create and uphold relations. The system was constructed in such a way that reinforced the position of the strongman at the same time, since the results of the works undertaken fell into his hands.

These different stories convey the same message: change is possible, but it has to come in a form that is consistent with custom, with the prevailing norms. When it does, it contributes to reforming custom, and a new “tradition” is constantly taking shape. But it is a step-by-step process in which every step has to follow on the previous one. It is also noteworthy that a lot of change actually is taking place. We have to some extent studied what is happening in the case of cattle breeding, cotton cultivation and vegetable gardening, all very dynamic activities. Bulls are being exchanged for cows, because bulls are quicker to breed, and give faster and larger economic returns. New forms of keeping cattle, closer to the house are emerging as well as new forms for resolving conflicts between herders and cultivators in the activity of cattle breeding. Examples may also be found in the other activities. But these changes are still being undertaken within the sphere of the Mossi peasant culture. Changes may not be of a kind that fully introduce new and unknown elements. We may along this line of thought also refer to the findings of Rogers as to how innovations are being diffused, i.e. the need for “thick” social relations in



order for innovations to be spread. But such thick relations also put limits to what is possible in terms of change.

To take the discussion a bit further, we may also apply the concepts of recognition and mis-recognition (*reconnaissance – méconnaissance*) to Mossi family economies. Lédéa Ouédraogo (1990, p 54) argues that economic interests simply did not exist in the Yatenga culture in earlier periods. Production was undertaken to fulfil biological, social and religious needs and there was no need for pure consumption. This may be interpreted as a process of recognition and mis-recognition in the field of being a peasant in the Mossi culture in Yatenga (Yatenga is not only a province, but also in the Mossi tradition a kingdom, competing with the Mossi kingdom centred around Ouagadougou). In that field the economic profit was mis-recognised, while the social, religious and biological interests were being recognised. What we see with processes of increasing migration, and increasing commercialisation is a shift, where younger generations and economically active persons to an increasing extent are recognising economic interests, while these are still being mis-recognised by an older generation. But rather than see this as a generational split, we may conceive of it as a struggle about how to define the field. When issues of power, authority and land tenure are dominating usually the older generation is the most influential, because it is mainly older people that hold positions of power in that field. But when issues of economic action dominate, it is often younger brothers and women that are more influential.

Another way of conceiving the same phenomenon is to relate to Brunsson and Olsen's analysis as regards possibilities of organisational change. They focus on the scope for reforming an organisation that to a greater or lesser extent is institutionalised, that is, governed by norms and customs. They take as a starting point for their analysis that organisations form part of the larger society in which they function. Hence there is not such a great leap to transfer their thoughts about organisational change to societal change in institutionalised settings. Hence, the parallels between what they write and the Mossi society are obvious:

“Organizational responses to external reform efforts are affected by the degree of consistency between the value basis and beliefs underlying a proposed reform and the value basis and beliefs of an organization....Organizations have their own dynamics. Incremental transformations through routinised processes which relate the organization to its environment will succeed as long as they are consistent with the established institutional identity of the organization” (Brunsson and Olsen, 1993, p 22).

The parallel lies in that the definition of what field one belongs to, inherently decides the value basis and beliefs that Brunsson and Olsen are discussing. Every field comes with a certain set of beliefs and a value basis. In the analysis of Brunsson and Olsen and that of Bourdieu we are facing some overriding norms that limit change in terms of pace and scope. As long as agents find themselves in the original field – or alternatively in the original organisation – they are free to change, to do things in a different way. But as soon as change implies a movement that crosses the borders of the field/organisation change becomes more difficult. There will in those cases always be stakeholders and agents that strive to uphold the norms that serve to define the field/organisation.

In her study about small business development in Tanzania and in Sweden, Tillmar (2002) points to the importance of indigenous institutions. These institutions may both have beneficial as well as detrimental effects for business development. The reason why they cannot be overlooked is their contribution in various ways to the creation and upholding of trust, which is essential for lowering business transaction costs. Indigenous institutions have an impact on trust through “category accountability” and “category characteristics” in Tillmar’s vocabulary (2002, p 218). She deals with different bases of trust, that is, general trust, category trust and specific trust. Category refers to the kind of trust that comes from characteristics ascribed to a particular group of some kind – ethnic, clan, religious or other. The reason why indigenous institutions contribute to this kind of trust is their reference mainly to some distinguishable groups. Indigenous, non-formal, institutions are essential because they in this way are preconditions for the trust that is needed in business development, as well as in development processes more broadly (Ibid, p 304). Tillmar sees the “rules of the game” as “the soil with its nutrients that enable trust and hence cooperation” (Ibid, p 297).

In processes of change there is normally a matter of scaling up activities to new levels. When exchange is undertaken within the local community, local and informal norms may guide such exchange. But when actors unknown to each other are to collaborate or exchange, there is a need for common rules, for institutions to become gradually more formal, and hence acceptable to people from different settings. We have above referred to the work of Woolcock on social capital. His argument is that both embeddedness and autonomy are needed at micro, as well as at macro level. Embeddedness at the micro – local – level means “integration”, that is, bonds within the group, within the local community. Autonomy on that level means “linkage”, that is, bonds with people outside the local community. The character of both these bonds needs to be such that they enable trust and through that provide informal information and insurance, which help in lowering transaction costs (Woolcock, 1998, p 173f, 177).

Building on these insights, we may apply as well the ideas of Granovetter, that development processes imply a shift from “coupling” to “decoupling” (Granovetter, 1995, p 137f, see also OPM, 2001, p 3). Such a shift relates to the scaling up of economic activities. The scaling up is not about straightforward modernisation, however. Legitimacy, and aspects that build trust need to be brought from indigenous institutions, over to more formal ones. The more formal institutions are needed to the extent that they increase the scale on which exchanges may be undertaken. But the informal, or indigenous institutions are needed to ensure the legitimacy of rules that guide transactions. This process has in another setting been phrased “formalisation dynamics” (Havnevik et al, 2003, p 50).

It is common in development literature to recognise the importance of indigenous institutions, but nevertheless concentrate on “formal” institutions. Formalised institutions are seen to be more stable in function and over time than informal ones. It is argued that a formalisation of collective action will make local arrangements more transparent and clear, and hence be an important aspect in evolutionary processes (Cleaver, 2002, p 40, INTRAC, 1998). An aspect involved is the

possibility proposed by Ostrom that institutions might be “crafted” or made more useful for the task at hand (1990, p 52, 192f). In that way, formalisation becomes a functional tool. Such arguments have been criticised for being blind to historical and social contexts. There are reasons to believe that institutional development is a more complex and context-bound process (Cleaver, 1995, 2000). This means that even if needs for formalisation dynamics are identified, this should not be seen as a straightforward or a linear process. Empirical studies are needed in order to find out more about the ways institutions change.

This translates into a process where indigenous institutions play a central role in processes of change. They need to be taken as starting points, as sources of legitimacy first and foremost, but also on some occasions as sources of trust. Indigenous institutions, as we have observed throughout the study, often hinder change. But, paradoxically, they may at the same time carry the seed of change. This seed will germinate if the rules that are needed to guide another system are accepted by the majority of actors and stakeholders within the new system, as was argued by Brunsson and Olsen.

The whole issue centres around the relationship between what is often termed “structure” and “agency”. The discussion on over- versus under-socialised explanations (Granovetter, 1992) has been introduced, as has the notion of “habitus”, in order to understand why individuals are able to act even though they are situated in a highly institutionalised environment that limits their options through “regulative” and “constitutive” rules. The notion “structure” may give the impression of something rigid, deterministic and impossible to change. But the empirical findings in this study point to the need of combining rigidity or inertia with agency and change.

Cleaver cites an example of women in Nepal who refused to participate in an irrigators’ association because their participation would have been bound by proper gender roles. They arranged instead for accessing water through male family members, neighbours or relatives who participated in the association, or simply through stealing and cheating (Cleaver, 2002, p 51f referring to Zwarteveen and Neupane, 1996). By choosing not to participate in the association, they were freer to act in a way that benefited them. Within the association, they would have been bound by a structure that institutionalised gender roles had provided. A parallel argument is relevant for the Mossi society. The economically most dynamic groups are, as we have seen, women and young men. At the same time, we have struggled with understanding the issue why young men returning from migratory work do not introduce the methods and products they have learned about when returning home to become household heads.

We may now see that change is taking place in areas where the “structure” may be avoided, where its influence is not felt to the same extent. In particular the younger men that carry less responsibility for the household are able to grow vegetables and keep the money for themselves, for their personal expenses. If the growing of vegetables had formed part of the basic undertakings of the household, much less dynamism would probably have been possible. Young men in such positions in the households are similarly able to breed bulls instead of cows and earn more money that way. Household heads are less free to be as expansive in their cattle breeding.

Household heads are able to grow cotton as a cash crop, but they are much more restricted in cultivating cereals for sale. Many more examples are available, and we may see that they together form a pattern.

There is a balance to be struck between structure and agency. More concretely this may be seen in the roles that women play. The household head bears the obligation to provide cereals for feeding the family. But it is the role of the woman to cook, and to provide the ingredients for the “sauce”. These ingredients come from the field that she is personally responsible for. She may cultivate cash crops and sell these and processed products at the market. And through this window of opportunity many women have developed quite dynamic economic activities. But they are always constrained by the responsibilities within the household. And in terms of incentives they are also bound by their roles within the household.

So what has emerged in terms of economic dynamism are activities that at the same time build on, and are constrained by, the household based structure of production. Economic dynamism, primarily on the part of sons and younger brothers, as well as women, is possible because the established socio-economic system provides for the feeding of the family. But it is also constrained by the norms prevailing in the household based production system. Hence, dynamism is possible when actors are able to play their parts in the system, while at the same time using and increasing the flexibility that exists in side activities. The “formalisation dynamic”, which implies the gradual move from informal to more formal institutions, is thus a complex process where agency needs to build on and utilise indigenous institutions, but at the same time free itself from its constraints. There is a need to go beyond these indigenous institutions, but it is not possible to leave them altogether.

## 8.6 Concluding Remarks

This analysis of different theories on agricultural growth in Sub-Saharan Africa has led to the conclusion that constitutive rules guide the behaviour of peasants, and furthermore that strong but “wrong” institutions set the stage for their activities. In the analytical framework used, the theories that belong to the lower left box that may best explain why change generally is slow, but nevertheless takes place in some activities.

	<i>Strong but “wrong” institutions</i>	<i>Not functioning institutions</i>
<i>Regulative rules guide behaviour</i>	Mamdani, Berry	Dorward et al, World Bank
<i>Constitutive rules guide behaviour</i>	Seppälä, Hydén	

However, neither the theories developed by Seppälä nor Hydén are directly applicable. They contain weaknesses as well, which make them insufficient for explaining processes such as those taking place on the Mossi Plateau in Burkina Faso. They come closer than other theories, but they do not fully explain what has

been observed empirically. However, additional insight is gained by the concepts developed by Bourdieu. They open up for a perspective where basic principles in the theoretical positions addressed by this study are not seen as mutually exclusive dichotomies. It is not a case of the Mossi peasant being either an individual rational actor or a socially determined role actor, but rather a combination of the two, where the role actor dominates. It is not a case of either structures guiding behaviour or agency being atomistic, but rather a combination, in which structures dominate.

This leads to a need for new theories about agricultural growth to be developed. Such theories that aim at explaining developments in Sub-Saharan Africa need to take income diversification into account. This widespread and continuing practice is an empirical fact that theories need to deal with in a convincing way. The argument that income diversification stems from different kind of dynamic than the one influencing the possibilities for agricultural growth is not fully convincing. The reason for this is that an empirical link between the debate about agricultural growth and that about income diversification was found in chapter 6. This link, or relationship, could be described in the following way: In the villages of Gandaogo, Zambanga, Korsimoro and Loumbila on the Mossi Plateau a web of indigenous institutions serve to maintain a socio-economic system, which has developed over a long time, and which is institutionalised to a great extent. This particular web creates among a majority of society members a reluctance to change, which in turn serves as a hindrance to income diversification. But, there is at the same time space for economic dynamism within this socio-economic system. The reason why economic dynamism shows a different pattern from income diversification is that there exist certain activities where economic dynamism may develop in spite of the fact that non-formal, indigenous institutions continue to keep their grip on central activities of peasant production. When it comes to the activities of cotton cultivation, vegetable gardening and cattle breeding, there is a space for certain categories of household members to develop economic dynamism. The web of indigenous institutions allow for more freedom in these activities. This means that market development takes place first and foremost in activities that are parallel to cereal cultivation. Market development is possible within the framework of the socio-economic system. In that sense the same kind of dynamic is behind the upholding of the system, the low prevalence of income diversification as well as the economic dynamism that takes place. It is not a matter of separate processes.

The reason why Mossi peasants diversify less than peasants in northern and southwestern Burkina Faso - as was found by Reardon et al in the early 1980s - is first and foremost that values about maintaining the Mossi identity and reciprocal relations have a very strong standing in the Mossi society. These values contribute to the upholding of indigenous institutions regarding social relations, the role of the household, land tenure and hierarchical structures. In addition, options exist for economic dynamism within the framework of traditional Mossi production strategies. They do not need to go outside their traditional way of producing or their traditional way of organising their households in order to expand into more profitable areas, since certain side activities opens up for such possibilities. The change that takes place is a gradual, and therefore limited, change from within the system.

There is a long-term trend of decreasing levels of rain, decreasing levels of soil nutrients and increasing volatility of rains forcing peasants to change their behaviour. But this process has yet to have the same influence on peasant household production strategies on the Mossi Plateau as in the northern parts of the country.

Such findings imply that the theoretical linkage that was made between the debates on income diversification and agricultural growth in chapter 2 is confirmed, since empirical linkages between the two areas exist more generally. However, there exist important differences as well. When income diversification is driven by a direct relationship to low reluctance to change, economic dynamism shows a more complex pattern. This dynamism is breaking through in certain specific areas, and is to a large extent associated with certain categories of household members, i.e. youth and women.

In areas related to food security, reciprocity or identity, there are a number of non-formal, indigenous institutions that Mossi peasants adhere to. These are, in important areas, the same indigenous institutions that guide income diversification and economic life more broadly. Hence, these institutions must be taken into consideration when agricultural growth is to be explained, as well as when economic reform programmes are discussed and assessed. These institutions are particular to the Mossi peasant society.

The results of this study must therefore be basically confined to the Mossi society. However, when it comes to theories that claim validity for the whole of Sub-Saharan Africa, the results of this study may be used for refuting them as general theories since they are not found valid in this particular part of Sub-Saharan Africa. Furthermore, it is highly probable that similar conclusions as has been drawn in this study might be drawn for other societies or countries in Sub-Saharan Africa, if studies are undertaken there. Burkina Faso was chosen as an object of study because agricultural sector reforms were comprehensively implemented there. This means that we may exclude slippage in the implementation as a factor explaining the low degree of results from reforms. Hence, Burkina Faso is a case where we would have expected reforms to produce good results in terms of agricultural growth. To the extent that this is not the case, there is a need to look into alternative explanations of agricultural growth. All this strengthens the argument that there is a need to search for new theories explaining agricultural growth in Sub-Saharan Africa more widely.

There is a need to be careful about generalisations, however. One important general conclusion that may be drawn from this study is that the embeddedness of economies needs to be analysed, and that it needs to be analysed in a contextual way. Theories must be open for important local differences, for instance as in the case of the Mossi Plateau that indigenous and non-formal institutions guide the economic behaviour of peasants. In that sense, there is a need for developing more nuanced and diversified micro economic underpinnings of growth theories. It is especially important to understand that institutions developed for other purposes than the efficient allocation of productive resources may in any case be used as

vehicles for such allocation, or at least influence decisions that relate to them in important ways.





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