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# The role of producer's associations in development processes

*An introduction to the case  
of Morrumbala, Mozambique*

Carla Inguggiato, Cecilia Navarra, Alex Vailati

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# The role of rural producers' associations in development processes: an introduction to the case of Morrumbala, Mozambique.

Carla Inguaggiato, Cecilia Navarra, Alex Vailati\*

## ABSTRACT

*This paper presents the preliminary results of a research on the producers' cooperative associations in the rural district of Morrumbala (Zambezia, Mozambique). The research has been started and lead by Prof. Enrico Luzzati, who died in November 2008. Our research group decided to continue this work, starting from his notes and documents. An important research topic emerges from his observation: the role of the associations in the introduction and diffusion of innovations. In this paper we set the research background on this issue, starting from an analysis of the rural cooperative promotion interventions in the area. After the civil war, Morrumbala district has been the target of some projects, that, according to a nowadays evaluation, seem to show very poor results. The first part of our work is devoted to the analysis of this failure. In 2006, an Italian NGO started a new project to strengthen rural producers' organizations in the same area. This new project represents the focus of the research. We adopt an interdisciplinary approach, combining together the economical and the anthropological point of view and using both qualitative and quantitative methods.*

## INTRODUCTION

This research, whose preliminary findings are presented in this working paper, was started by Professor Enrico Luzzati within the Prin 2006 program named *Rural producers associations and grassroots development: the case of Morrumbala, Mozambique*. This is a Local Unit of the program *Governance and institution building: a virtuous circle of development and poverty reduction*

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*policies in Southern Africa?*, whose national coordinator is Prof. Anna Maria Gentili, University of Bologna.

Professor Luzzati died last November. This sorrowful event leaves a terrible void for everyone who knew him and worked with him.

Enrico Luzzati was professor at the University of Turin, where he launched jointly with other colleagues a degree program in Cooperation and Development (*Sviluppo e cooperazione*), and where he taught courses in International Cooperation for Development and Grassroots Development Strategies. Throughout his life he was a dedicated professor, a scholar deeply involved in the training of his students, capable of transmitting his love for knowledge and his warm motivation to them. He was strongly committed to the study of the tools of bottom-up development strategies in poor rural areas, mainly of the cooperative organization of production, as a more 'appropriate' institution to increase incomes and to promote a 'non-disruptive modernization'. He devoted most of his work to developing field studies in close relationship with NGOs and development agencies because of his strong commitment to action-oriented research: a better understanding of reality as a means to better transform it. He worked extensively on Sub-Saharan Africa. Mozambique was one of the countries with which he had a strongest relationship, both scientifically and affectively.

His constant interest throughout his life was the building of communitarian institutions, in the form of rural associations or multifunctional cooperatives that might unite people in pursuing common goals in terms of production and welfare through the sharing of feelings of belonging and identity. According to his vision, rural development had to be understood as the advancement of collective welfare based on bonds of solidarity. In this field, he developed the idea of "communitarian cooperatives", where *«members pursue profits, but they are interested in other members' wellbeing too. The group, in this case, is not a mere tool for reaching individual objectives, but it has a specific aim, an autonomous identity and value»* [Luzzati, 2009: 162].

His interests ranged from the history of the kibbutz experience in Israel to the anthropology of African rural societies, from the contribution of institutional economics to debates on grassroots development in Africa. In his field studies, he located experiences of rural associations or cooperatives in developing countries all over the world, monitoring and evaluating their evolution and results. He studied and supported those organizations in many different places in the world, in Africa, Latin America and Asia, but also in

Europe, where he looked at many experiences of economies and production embedded in 'communitarian' networks.

Despite his ideal strength and his link to the utopian socialist approach, Enrico Luzzati always kept alive his critical spirit in looking at the role of the 'community' in the economic and political arenas, focusing on the limitations of such a role, and studying what allows such experiences to become the true means of local development and empowerment. Concerning the developing world, Enrico Luzzati worked for several years as a consultant for various governmental agencies for international cooperation, and finally devoted his engagement to grassroots development projects, closely linked to local people's needs. In his work and research, he had an especially long contact with the cooperative movement in Mozambique, where he would spend a month each year doing volunteer work at the *União Geral das Cooperativas* in Maputo, being a good friend of Padre Prosperino Gallipoli, to whom he offered invaluable help.

Enrico Luzzati was deeply convinced that human people are not just selfish individuals, but that they are longing for relationships, affection, bonds of friendship and union with other people. In his vision of history, which was heavily inspired by Karl Polanyi, he thought that capitalism had contributed to the advancement of material wealth in the long term, but had compromised the strength of social ties, therefore offering little contribution to the bettering of the human condition in terms of happiness that crucially depends on relationships and sociability. The search for a model of economic relationships that is not disruptive of the social bonds among people was his main concern.

We, as young collaborators, thought that the best way to remember him and his work was to try to carry on his research, first of all through the project in Zambezia province in Mozambique that was particularly important to him. Besides his strong link with the region, it was important because it collects a lot of relevant aspects of his main research interests: the role in development processes of non-capitalistic cooperative producers' organizations, the possible appearance of forms of enterprises 'embedded' into the social structure and community dynamics, and the role of international cooperation actors in these processes.

Our research group is composed of Dott. Cecilia Navarra and Dott. Carla Inguaggiato, who were already working with Prof. Luzzati on this study, and by Dott. Alex Vailati, whose contribution allowed us to make the economists' and anthropological perspectives meet. We choose an interdisciplinary approach

because we believe in its scientific relevance and we think it better represents Professor Luzzati's attitude towards research and field work.

We wish to thank Prof. Luzzati's family and especially Mrs. Nadia Yedid, his wife, because of the great support we received from them to continue Enrico's work. An important acknowledgement goes moreover to Prof. Astrig Tasgian, who became the director of our research unit after Prof. Luzzati's passing and who helped us to carry on this research, and to Sergio Gorrino, agronomist and Enrico's close friend, who has been and still is a resourceful help in our empirical research, thanks also to his deep knowledge of this field of study. Finally, we would also deeply like to thank Prof. Bruna Ingraio, Prof. Anna Maria Gentili, Prof. Leonardo Ditta, Dott. Corrado Tornimbeni, and all of Prof. Luzzati's friends and colleagues we had the chance to meet in the PRIN research programme who showed a great affection towards Enrico and who helped us immensely in the difficult task of carrying on this work without him.

The object of this study are a number of rural producers' associations that are members of the UDCM (*União Distrital dos Camponeses de Morrumbala*), an organization federated with UNAC (*União Nacional dos Camponeses*). The underlying question inspiring this research is whether, in that specific context, a cooperative organization (that is also 'non-capitalistic') can be an appropriate tool to foster income-generating and development processes. Here, we present the preliminary reflections and results of a work in progress, that does not claim to answer the above question, but that tries - starting from Prof. Luzzati's field work and from our research team's elaboration - to set out the basis for further inquiry to be continued in the following months. Our method is interdisciplinary and mirrors Luzzati's approach to this research and more generally to his scientific activity. Our research group, including skills both in economics and in anthropology, allows us to enrich the research tools and explanations with reference to more than one discipline.

After the Mozambique civil war, Morrumbala district has been the focus of a rural cooperative promotion project. According to a recent evaluation, this project had very poor results. The first part of our work is devoted to the analysis of this failure. In 2006, an Italian NGO started a new project aimed at strengthening some rural producers' organizations in the same area. This new project, that is trying to take advantage of the lessons taught by previous experiences, represents the focus of our research, which can be seen also as an on-going evaluation of it. In this paper we present the preliminary results of our empirical investigations, and we discuss the theoretical tools that framed our research.



From a methodological point of view, we tried to integrate qualitative and quantitative tools. The first step is the construction of a panel dataset at the association level, describing the situation at the beginning of the project of new cooperatives promotion, started in 2006. From this dataset analysis, we will select those households that will be the object of a survey aimed at evaluating the impact of belonging to an association. The survey will be carried out with qualitative tools, by comparing households that are members of an association with households that are not.

The evaluation analysis will proceed following some thematic lines, among which we underline the importance of the role of the association as an engine of innovation, drawing both from the economic and from the anthropological literature on the domain. The contribution of this twofold approach is the match of an empirical test of the role of innovation with a discussion on the meaning itself of this category in the local context of Morrumbala.

In the first chapter, we present some remarks from the economic literature, namely the New-Institutionalist one, with a twofold aim: first of all, we want to explain why we use the category of ‘cooperative enterprise’, despite the fact that it is not the term used in our study context, discussing its definition. Then, we will present a short review of the literature on the possible advantages of a non-capitalistic producers’ organization in fostering grassroots development processes, besides the productive activity itself.

After a historical introduction on Morrumbala district, in the third chapter, we are going to make a first attempt at analyzing the reasons for the failure of the cooperative promotion project of the 1990s, mainly relying on Prof. Luzzati’s direct observations. In the fourth chapter, we are going to describe today’s picture of our case study, the UDCM, in qualitative terms. In the fifth chapter, we are going to enlarge the picture through a first glance at the dataset on associations: these are introductory descriptive figures, that may provide some interesting hints for the following research steps.

Finally, in the last chapter, we will introduce the core theme of our future work, that is the role of innovation, which, considering our interdisciplinary approach, we will address by matching different possible definitions.

## **1. RURAL PRODUCERS’ ORGANIZATIONS AS DEVELOPMENT TOOLS**

Recently, in the economic debate, there has been renewed interest in institutions fitting the definition given by Douglass North of *«humanly devised constraints that shape human interaction»* [North, 1990: 3], that means those norms that rule the functioning of society, shaping incentives and sanctions.

Among institutions we thus consider alternative enterprise property regimes. The strictly neoclassical approach, by modelling the firm as a function of production, does not pay attention to its governance structure and to its ownership pattern. The New-Institutionalist approach introduces (reintroduces, to be more correct) in the debate the effect of different ownership structures on the functioning of the firm and on its efficiency. The firm then ceases to be considered as a mere function of production to become a governance structure [Williamson, 1985]. Nevertheless, the capitalist enterprise is usually considered to be the one able to produce the best set of incentives, and the existence of other organizational forms is justified simply as a reaction to existing market failures. On the contrary, our analysis inquires into the possibility that a productive non-capitalistic association, with a peculiar orientation towards the local community, could be an appropriate tool to trigger income-generating processes and development dynamics. In what follows, we will discuss some crucial themes in order to define a productive non-capitalistic organization, and then we are going to review some theoretical issues, that may suggest the need for a deep analysis, when examining development processes, of various possible organizational and ownership structures of production.

### **1.1. Non-capitalistic productive organizations**

We start by introducing a definition of the cooperative enterprise and by explaining the reason why we use this category, despite the fact that it does not officially show up in our case study. Non capitalistic firms are those firms where property rights are held by stakeholders that are not *mainly* capital investors, but that have another relationship with the firm (e.g. they are workers, producers, consumers). Firms that belong to this category are defined as cooperative enterprises.

It is useful to refer to the literature on cooperative enterprises because of the similarity between what is defined as a producers' cooperative and the features of the associations that are members of the UDCM: enterprises whose property rights belong to primary producers and that provide services to members (e.g. commercialization, credit, product stocking, training). Among the purposes of the promoters of this network of cooperatives there is the idea that they can supply services for the community as a whole, besides the provision of services strictly directed towards producer-members. This means we can use, at least partially, the definition of *multistakeholder* cooperative, that is a kind of cooperative whose owners are not a single category of actors within the firm, but on the contrary, they can be workers, consumers,

customers of cooperative's services, etc. In these cases, the relationship between the cooperative and its members involves the local community and is linked to a certain geographical territory, rather than to a specific social group. Following some authors, this kind of firm has a great potential in terms of development of its local context [Levi, 1998]. If the more appropriate category, from the economists' perspective, to define our case study is the 'cooperative' one, why did we not use it in the context we are analyzing? The reason has to do with the history of the term 'cooperative', since the term had been used to define the organizational form given to agriculture by the post-colonial government guided by FRELIMO in Mozambique, and that was a pillar of its socialist economic policy. The former, jointly with the policy of forced 'villagization' of peasants into the *aldeias comunais*, had a well-known negative outcome. The literature on cooperative enterprises focuses mainly on worker cooperatives (labour-managed firms), that are usually defined as firms characterized by workers' control, whose necessary condition is the allocation of decision making rights to workers, with two consequent elements, that are profit sharing and workers having financial stake in the firm [Bonin et al., 1993]<sup>1</sup>. This definition can easily be extended to other categories of *stakeholders* other than workers. Moreover, as underlined by Jossa and Cuomo [2000], despite the fact that its members are entitled to shares, they usually take decisions on a 'one-member one-vote' basis, thus following the democratic principle. This characteristic also is present in the UDCM, where decisions are taken by the members' general assembly, which also elects the governing board. There exists a wide literature, both neoclassical and neo-institutional, that explains the rarity of the cooperative enterprise with respect to the capitalist one, looking at the inefficiencies of the former with respect to the latter, in a functionalist perspective. There is a wide literature, therefore, that analyzes the possible inefficiencies of cooperatives. We cannot here review the entirety of this literature, but it is interesting to recall, among others, the contributions of the 'Principal-Agent' approach on this issue [*inter alia*, Jensen and Meckling, 1976; Holmström and Milgrom, 1994], which interprets the firm as a set of contracts, whose aim is to make compatible otherwise conflicting interests, through the

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<sup>1</sup> This definition implies that the fundamental element is considered to be the allocation of decision making rights to members (workers, producers, etc); participation in the financing and in the results of the firm is considered to be a necessary condition implied by the allocation of the decision making power, because of a moral hazard problem emerging in case of taking decisions without bearing their consequences.

provision of an adequate incentive system<sup>2</sup>. In this perspective, Alchian and Demsetz [1972] had already argued that an individual, within the firm, has to be in charge of monitoring others' activities, and that he has to be the one who appropriates the residual outcome of production (what the firms gains, after having paid all the costs), because of the need for efficiently monitoring others' effort. Following these two authors, it is efficient that this monitoring and residual-claimancy role is taken by the capital-owner, in order to avoid the risk of opportunistic behaviour<sup>3</sup>.

This claim has been subject to a number of criticisms: Jossa [2005] argues that, if worker (or producer)-members are allowed to appropriate the residual gains of production, they will have efficient incentives to make increased efforts, regardless of the monitoring structure. More generally, it is interesting to recall the analysis made by Pagano [1989], that compares the New-Institutionalist approach with the Labour Process literature [Bowles and Gintis, 1994]: in the former, the characteristics of the assets entering as inputs in the production process (asset characteristics are transaction costs<sup>4</sup> and their 'specificity' in a particular production process)<sup>5</sup> determine the organization of production and its property rights structure. In the latter, on the contrary, it is the form of the organization of production itself that determines the asset specificity and the cost of the transaction between producers and the firm. In this approach, then, the establishment of a peculiar pattern of property rights is a path-dependent process, wherein the institutional setting is the outcome of a historical process, rather than being determined by the efficient combination of resources by their characteristics.

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<sup>2</sup> More precisely, the aim of the firm is to align the interests of the agent (the employee) to those of the principal (the employer), on behalf of whom the agent undertakes an action.

<sup>3</sup> That is the moral hazard problem that would arise if workers appropriated residually of the product obtained through a capital (physical or financial) that doesn't belong to them.

<sup>4</sup> Transaction costs are the costs of the interaction among agents (thus different from production costs), such as coordination, monitoring and negotiating costs, and they are influenced by alternative governance structures of the firm. The main reference for this literature is Williamson [1985].

<sup>5</sup> Asset specificity to a particular production indicates how high would be the cost for that asset to be transferred to an alternative use, that is to say to what extent it is bound to that specific production process.

## 1.2. Non-capitalistic productive organisations as tools for development

In this section, we would like to recall some theoretical arguments suggesting that cooperative productive associations can be more appropriate in the context of our case study than capitalist enterprises. These arguments are not necessarily theoretical assumptions that are going to be employed in our research; they are rather issues, already dealt with in the existing literature, that may be helpful to contextualize our work within the ongoing theoretical debate, and that may become tools of analysis when applied to the empirical case study. Besides the possibility of exploiting economies of scale, an important issue is the 'bargaining power' of rural producers: cooperatives may allow peasants to face monopsony or oligopsony conditions (buyers' market power). This claim is also consistent with Hansmann's model [1996]<sup>6</sup>: producers, in this case, could have high *market contracting costs* when relating to the buyer in the market.

As observed by some authors, another aspect that makes cooperative organizations interesting is the possible presence, in some contexts, of social norms limiting processes of individual accumulation of wealth [Platteau, 2000]. Since capital accumulation is a crucial element for the promotion of productive activity, it is worth analyzing whether some form of collective accumulation (that is without any kind of differentiation among group members) may be a more suitable tool for such contexts.

An enterprise organized in a cooperative form can moreover play a role in income support and provision of public goods for the community. In his considerable work on Tanzania, Putterman [1986] remarks that the distributive function of cooperatives (usually in the form of provision of public goods) can be considered a factor promoting workers' or members' participation in the enterprise.

On this topic, there are some interesting empirical works that distinguish between community-oriented and market-oriented peasants' organizations in Sahelian countries [De Janvry and Sadoulet, 2004; Bernard et al., 2005]: even if

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<sup>6</sup> Hansmann's model is a recent formulation of the determination of the efficient pattern of ownership of the firm, on the basis of transaction costs: among various groups of patrons (stakeholders), the owner will be the one who minimizes the sum of the whole amount of transaction costs. These include costs of ownership (sustained by the owner) and costs of market contracting (sustained by other patrons, that are 'bought' by the firm).

authors do not concentrate on this, there seems to be a wide overlapping area between these two sorts of organizations. This may indicate that it is not rare to find market oriented organizations that also carry out distributive and welfare tasks. The distributive function could also be a reason for an increased capacity in bearing the risk of economic activity. One of the consequences of poverty, as it is often argued, is a low risk-bearing capacity [Fafchamps, 2003; Bardhan, 2005]. Insurance and distributive practices can increase this capacity: for instance, Platteau and Seki [2001] show that ‘income pooling’ practices play such a role in some Japanese fisheries.

Generally speaking, the literature on developing countries underlining the role of productive associations as insurance providers and promoters of risk-sharing practices, besides their income generating activity, is considerable; it is important to recall, among others, Carter [1987], and, more generally, on the insurance function of ‘commons’, Baland and François [2003]<sup>7</sup>. In our case study, this function may be represented by credit provision directed to those who are not able to pay for field preparation before sowing, the creation of work groups, and the building of common infrastructures.

Finally, some authors investigated the possibility that cooperative enterprises represent an innovation from the point of view of the organization of production with fewer ‘uprooting’ effects as compared to the capitalistic one. Without claiming to identify *tout court* ‘solidarity-oriented’ contexts, these authors studied which context-specific elements and informal institutions can trigger the development of a cooperative mode of production (e.g. a collective land tenure or the collective ownership of irrigation structures). We can recall here the works of Ronald Dore [1971], Maxime Haubert [1981] and of Enrico Luzzati himself [2002].

We have so far mentioned some elements taken from existing economic literature that allow us to contextualize our work both with respect to the New-Institutionalist theories of the firm and to the microeconomic literature on institutions in developing countries. Let us now discuss our case study.

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<sup>7</sup> Risk is defined as ‘an external shock that affects the well being of people’ [Fafchamps, 2003].

## 2. THE DISTRICT OF MORRUMBALA

### 2.1. Historical introduction

Zambezia is the broad region that includes the district of Morrumbala. This region was, until 1900, the most important part of the Portuguese settlement. The Zambezi River was an important channel for commercial purposes. The river, in the past, connected the Indian Ocean to the more inland area, which was under the control of Monomotapa Empire [Papagno, 1972]. When the capital moved to Lourenço Marques (now Maputo), the South of the country became the most important part.

The district of Morrumbala is in the heart of Zambezia. Its name probably came from the name of the mount Morrumbala, which means 'barrier', separating the district from the river Shire. The second hypothesis suggests its name came from a population called Amarambara, which lived around that mountain. Considering that Amarambara means 'barrier's population', both versions look very similar.

We do not have clear data about the people that lived in this area when the Portuguese arrived. The languages mainly diffused in the area were at that time probably Sena and Lomwe. Other languages, for example Lolo, were also spoken. We can state here that the first Portuguese explorers probably found in Morrumbala a complex mosaic of culture and languages.

A particular kind of political and economic institution, called *prazos da coroa*, had large diffusion in Zambezia, starting from 1700. Initially, this model was only a land grant regulation. Later, the *prazos* became a more complex political structure [Papagno, 1972], with a regulation also for the transmission of the hereditary power title. Isaacman stated that the *prazos* could be considered as the 'state' [Isaacman, 1972].

One of these *prazos*, called Massangire, under the kinship of Mataquenha, was constituted on the left bank of the Zambesi, and included all the land that nowadays is part of Morrumbala District. The Portuguese started to rule the area of Massangire only after an 1884 insurrection in which Mataquenha II was deposed. In 1891, the Portuguese King granted the commercial rights to Mozambique to *Companhia de Mocambique*. From this date on, we can say that the modern colonizing process started.

Massangire's *prazo* was ruled, from 1896, by the Pereira, Dúlio e C.'s firm. Later the *Companhia da Zambezia* started to rule there, and realized a small agaves plantation near Pinda-Vila Bocage. This village became the main town of

the district and in 1930 it was officially named as local administration of Massingire [Saul, 1981]. In that year we can state that the *prazos*' time was definitively over.

From 1933 onwards, the right to farm was exclusively under the control of Lopes & Irmao's firm, which improved the cotton cultivation [Negrao, 2005]. On 17th November 1945, the district was renamed Morrumbala, and the main town was moved to M'bobo, that is the name of a small river, and now is the home of where is Vila de Morrumbala town.

An important consideration concerns the work of Italian missionaries. Since 1947 both Cappuccini and Dehoniani (two Italian religious orders) were present in the district. The Cappuccini from Bari created, in 1951, the San Giovanni Battista's Mission in the village of Cumbabo, which is ten kilometres away from Morrumbala. Here they built a big church and the first secondary school of the district.

The civil war had a great impact on the district. Indeed, Zambezia was directly involved in the war from 1978 onwards. In 1982, RENAMO started to control the capital Quelimane, with great damage for the local population. FRELIMO placed his stronghold in the Mecange, in the southern part of the district. Part of the population took refuge there, but many people ran off to Malawi, where they found hospitality in refugee camps. Few people returned to the place they lived in before the war. RENAMO administered almost the whole area in the period of the war.

## **2.2. An outline on demography, society and economic situation of Morrumbala district.**

Morrumbala district is the second district in terms of population in the Zambezia region. The population, according to the last population census in Mozambique (2007) was of 361.896 inhabitants (51,4% female). The population density is 28 inhabitants per square kilometre. The population is very young (46% of the population is less than 15 years old) and the urbanization rate is very low at roughly 4,12%. In the district, the main urban agglomerations are Vila de Morrumbala, capital of the district, and Derre, Chire and Megaza, where the main markets are. 86% of population does not know Portuguese: the most important local languages are Sena, Lolo and Lomué. The enrolment rate is 15% of the total population over 2 years old and 89% of population is illiterate<sup>8</sup>. In

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<sup>8</sup> See Ministério da Administração Estatal, *Perfil do Distrito*, 2005.



the district, there are in total 209 schools including elementary schools, middle schools and high schools<sup>9</sup>.

The human poverty index (2003 estimate) is 52%, and approximately 72% of local consumption is devoted to food expenditures, followed by housing, transport and clothing. In Vila de Morrumbala, there is an electric and telephone network, while in the rest of the district the access to these services is either very partial or totally lacking in many areas. Health facilities are insufficient to satisfy the population's needs, and there is approximately one health service for about 30.000 people, one hospital bed for every 3.800 people, and a doctor or a nurse every 6.300 people<sup>10</sup>. In the district there are in total 14 health structures and each one of them covers a population that goes from a minimum of 11.946 to a maximum of 89.096 people. In the whole district there is only one medical doctor in the rural district hospital which is situated in Vila de Morrumbala<sup>11</sup>.

Access to water is very difficult and often the only sources are the several streams and rivers, but which have a very irregular flow. One third of the permanent sources of water are concentrated in the capital of the district. In most parts of the district, people have to walk approximately between 5 and 10 kilometres to reach the nearest source of water. In the area of Derre, the only well available serves approximately 30.000 people.

The main method of transport is the bicycle, used also for the transport of goods (trade is an economic activity), which is mainly the responsibility of men. The population lives in houses made of mud or baked bricks while the roof is usually made of straw (there are very few cases of roofs made of tin foil). The population is spread over the entire district, and often you can find a single house where one family lives very far from other houses. There are also cases of more than one house in the same area and this happens especially in polygamous families where each little house corresponds to a wife and her children. The average number of children per couple is 6 but there are also families that have more than 20 children. Women carry out most of the working activities; they are in fact responsible for agricultural activities, for getting the water from the well and all the other domestic activities. Though women play a fundamental role in the economy of the district, they are almost

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<sup>9</sup> Interview realized in 2009 to District Direction of Education Services.

<sup>10</sup> See Ministério da Administração Estatal, *Perfil do Distrito*, 2005.

<sup>11</sup> Dates taken from interviews realized at the District Direction of Health Services.

completely excluded from the management of family wealth unless they own the piece of land on which they are working.

The district economy is essentially based on agriculture, which represents 95% of employment in the district. It is very scarcely monetized and most commercial exchanges, especially in more remote areas, are in goods. The industrial and the tertiary sector employ respectively 2% and 3% of the population. The average dimension of the field is one hectare but there is a very unequal distribution of land ownership in the district. In fact, 72% of the population owns less than one hectare each, while 7% of the agricultural enterprises own 28% of the land. Agricultural techniques are very primitive and work is done essentially by hand. Only near the boundary with Malawi do farmers use animal traction. Mechanical agricultural equipment is not diffused and are mainly owned by the multinational cotton company in the district Dunavant<sup>12</sup> (the only big enterprise in the district since 1998). Before this company, there was a national enterprise called Agrimo<sup>13</sup>.

The main agricultural products of the district are maize, several varieties of beans (*boer*, *nhemba* and *manteiga* are the most important), cassava, cotton, potato, sugar cane and sesame. The main elements of the population's diet are maize wheat, millet or cassava with beans and leaves of cassava or beans. Agricultural activity is mainly characterized by smallholder and subsistence production. Farmers tend to grow more than one crop in the same field. This technique is used to enrich the land. The most important cash crops are cotton and maize (part of the people's diet). In the most humid areas, the plots next to streams usually also grow rice and sweet potatoes. In the district, hunting and fishing also represent an important source of food for the population. Finally, in Boroma and Guerissa there are two stone quarries that are important sources of construction material for the district. Before Mozambique's independence, there were two important commercial companies that produced rice and cotton, especially in the area of Megaza and Morire (Chire area). Commercialization of

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<sup>12</sup> Dunavant Enterprises Inc. is the largest privately owned cotton merchandiser in the world, handling more than 6 million bales of US and foreign cotton per year. It has a long experience in supporting small scale farmers by providing crop inputs, such as seeds and equipment on credit and by creating marketing linkages with the international market. Dunavant's offices are located in the major cotton producing areas of the US and all over the world. It is a major player in small scale cotton production in Uganda, Zambia and Mozambique.

<sup>13</sup> See Ministério da Administração Estatal, *Perfil do Distrito*, 2005.

crops was realized through a network of *cantineiros rurais* that used to guarantee an efficient commercialization of agricultural products.

After the war, infrastructures were seriously damaged and the commercialization of agriculture products became a serious concern. Local markets and fairs are concentrated especially in Vila de Morrumbala, Derre and Chire. In this last area, bordering Malawi, cross-border trade is widespread. Because of very bad road conditions, many people would in fact prefer to sell their products over the border instead of selling them in Morrumbala district or in other areas of the Zambezia region. The capital of the region Quelimane is approximately 200 kilometres away from Vila de Morrumbala. It takes approximately 3 hours to get there by a car. There is also an informal private transport called *chapa* to Quelimane and another one linking different parts of the district, but both of them are irregular and expensive because of the high cost of fuel in the area. The bad road conditions, the very scarce public-private transport system and the high cost of fuel make very difficult the commercialization of products in the district and in general in the region. In fact, to a large extent commercialization is carried out by smallholder producers on bicycles. In the district, there were no banking and financial services until very recently. Currently, Gapi Sarl<sup>14</sup> works in the district only through the mediation of the multinational Dunavant. In the future, the opening of a new branch of Gapi is foreseen. There are no microfinance institutions operating in the district at this time, however there is a traditional credit system, especially widespread among wage earners, called *Xitique*. In Mozambique this is the name given to the savings practice and savings institution generally referred as Rotating Credit and Saving Association (ROSCA). Once, the most common technique used to be *makuti*, a version of ROSCA based on labour force exchange. However, this practice is nowadays disappearing because of a lack of trust among the rural population.

### **3. DEVELOPMENT PROJECTS IN THE DISTRICT OF MORRUMBALA**

Apart from Dunavant and Gapi, the main enterprises working in the district, there are several national and international Non Governmental

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<sup>14</sup> Founded in 1990, GAPI Sarl is a Mozambican investment company whose mission is to contribute to the social and economic development of Mozambique through the promotion of local small and medium-sized enterprises (SMEs) and micro-finance institutions. GAPI is also a banking institution. Their main financial products are loans to SMEs, wholesale credit for micro-credit institutions (MFIs), and venture capital.

Organizations (NGOs) including World Vision, Oikos, Oram, Nexus-Progetto Sviluppo, Save the Children, Cruz Vermelha de Moçambique and Associação dos Deficientes Moçambicanos (ADEMO). The first three NGOs focus on rural development. The main common characteristic of all these actors is their work with communities through the creation of producers' associations or working groups. It is a work methodology that tries to reduce transaction costs and takes advantage of economies of scale in contexts where the population is sparsely distributed and communication systems are very scarce. The first international development projects focused on rural development were realized in the mid-1990s by the American NGO World Vision and by the Italian Agency for Cooperation<sup>15</sup>. The main objective of these projects was to promote the resettlement of refugees in Malawi during the war. The main characteristics of World Vision methodology will be described below, while the project financed by the Italian Agency for Cooperation will be analysed in the following chapter.

In 1996, the American NGO World Vision started working in the district. They worked with communities and focussed on problems such as nutrition, childhood protection, literacy, HIV-AIDS programs and rural development. The project focused on rural development is called 'Ovata'. The methodology used envisaged the creation of working groups of a maximum of 15-20 people. The main objective of this program was to improve the commercialization of agricultural products. The NGO activities focused mainly on three areas of the district that were particularly active from a commercial point of view: Vila de Morrumbala (60%), Derre (20%) and Megaza (20%). It is important to note that some of the associations which are now members of the União Distrital dos Camponeses de Morrumbala, the object of our case study, were groups firstly created by the Ovata project.

In 2006-2007, a project of the World Bank called 'Market-Led Smallholder Development in the Zambezi Valley' was approved and led to an increase in the number of development actors. The NGO Rural Association for Mutual Support (ORAM) has worked in the district since 2006, and works with local communities that tend to be organized in associations. The main objective of this institution is to try to protect the communities' right to their land through registration and delimitation of the land in various *regulados*<sup>16</sup> by spreading of information on the land law, and protecting the communities' right to use their

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<sup>15</sup> Cooperazione Italiana allo Sviluppo.

<sup>16</sup> It corresponds to the smallest administrative unit. The term *regulado* describes the territory that is controlled by a traditional leader called *regulo*.

land. The association also organizes courses on the controlled use of the 'slash and burn' forestry technique, which is very common in that area and which has frequently caused large fires.

The Portuguese NGO Oikos has been in Morrumbala and Mutarara since April 2007 for an emergency project (Echo) financed by the European Commission's Humanitarian Aid Department as a consequence of a flood that seriously damaged the agriculture production of the district. Oikos' main responsibilities are the distribution of maize, vegetables, hens and the provision of courses in dietary education and natural disaster management. Oikos has created associations to distribute their material; the aim of these associations is to introduce small economic activities that could guarantee the sustainability of the newly-created associations.

Moreover, since 2006, the Mozambican Government has granted all districts a monetary fund whose objective is to promote local development. The fund is devoted to financing small loans for activities which aim to create employment and to improve agricultural production and farming. The regulations adopted by the Administration of the district of Morrumbala state that creating an association is a precondition to have access to such credit.

In 2006, the Italian NGO Nexus-Progetto Sviluppo started a project that aims to strengthen the associations in Morrumbala district, starting with those created by previous projects in the Morrumbala, and to give them technical assistance. This project constitutes our case study. In the next two chapters we will focus firstly on the analysis of the project of the Italian Embassy and secondly on the project realized by *Progetto Sviluppo* and the current situation of the UDCM.

#### **4. HISTORY AND ANALYSIS OF THE PROJECTS IN MORRUMBALA TO SUPPORT UDCM**

On the 8th of September 1994, the Italian Embassy of Maputo approved the project called *Costituzione di Associazioni di servizio nel distretto di Morrumbala*. The objective of this project was to bring the associative movement to rural areas. The idea for this project gets its inspiration from the work of Padre Prosperino, an Italian priest who devoted his life to the promotion of rural populations' welfare in Mozambique. He developed several initiatives in the country that have as common background the creation of producer's associations as tools for development. The most important of his initiatives is certainly the União Geral das Cooperativas (UGC) of Maputo. The local partner of the project was the União Nacional dos Camponeses (UNAC).

From 1994 to 2000, training and technical assistance of the associations were responsibility of the UNAC, which has its headquarters in Maputo. These were cooperatives that were no longer attached to the State-led cooperative movement promoted by post-independence FRELIMO government (as mentioned in the first chapter).

In 1998, the União Distrital dos Camponeses de Morrumbala was constituted and in 2000 its first general assembly was held. It was composed of approximately 30 rural associations in the entire district from Derre to Chire. From to 2000 to 2006, the associations that were members of the UDCM were left to themselves and their number decreased to 24 in 2006, at which point Progetto Sviluppo intervened.

The above project was financed directly by the Italian Embassy, for an amount of \$457.490. The expected duration of the project was 12 months, but its real duration has been 3 years. In the meantime, many other institutions started to operate in this area. For example, during the initial stage of the Italian project the Swiss NGO Terre des Hommes approved the purchase of a farm tractor for the Association Nhamodo, which cost approximately \$25.000. The Spanish cooperation, also engaged with the UNAC, approved funding for the Italian project's continuation, with the same aims and methodologies. The Iepala NGO, from Madrid, realized the project. On 18<sup>th</sup> April 1995, the Spanish Ministry of Foreign Affairs approved a project for rural development in the Morrumbala district. The duration of the project was 18 months with a budget of \$689.849. This time as well, the aims and methodologies were the same as those of the Italian project.

As a whole, we can state that from 1995 to 2003, in the district of Morrumbala, international cooperation has spent \$2.126.381. If we divide this amount by an estimation of the number of beneficiaries<sup>17</sup>, we observe that the expense made by international cooperation has been of \$292 per capita, an important amount of money, given that the GDP per capita of Mozambique (current prices) was \$248 in 2003, and the GDP measure based on PPP was \$619<sup>18</sup>. An objective evaluation of these projects, trying to assess investments and results, must focus on the problems observed. The UDCM's association

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<sup>17</sup> This number is estimated on the basis of the nowadays number of members of UDCM (1039), multiplied by the average number of members of a household (7), thus assuming that only one member of a household is part of the association, and that the benefits of it are spread on all the members.

<sup>18</sup> World Economic Outlook Database, IMF, 2009.

continued to exist, but the number of members number has decreased as well as the association's work. Therefore, in this paper we will try to analyze events that occurred during these projects's lifespan. Our analysis will be based on direct observations made by Professor Enrico Luzzati.

If we ask the project's beneficiaries what is the main problem from their point of view, they will unanimously answer the lack of training. This is due to the fact that these projects were not based on a research which studied the local context. The primary aim was increasing production, but who had outlined the project did not consider the lack of skills of the local population. The introduction of farm tractors is an emblematic example. Indeed, among the local people no one was trained for their maintenance and the result was the deterioration and the neglecting of those facilities.

A second problem concerned veterinary training. For example, in 2002, many chickens were brought to Muanembize, and all of them died of Newcastle disease. The local animal husbandry office did not provide any assistance and no vaccines were available. Another important issue was the scarce knowledge of management for market oriented production. Farm tractors were rented for a drastically reduced price and without any kind of regulation, or else products were sold at uncompetitive prices. In conclusion, the overestimation of human capital is a key issue in explaining the poor results of these projects. Another issue as well had an important impact on the project's results, namely the use of the associations' facilities and capital for private purposes. We could easily define these practices as related to corruption, but we are trying to understand the deeper motivations<sup>19</sup>. As we will try to explain, one of our research aims is understanding how local social and political systems are related to the way the associations work. Many other examples, concerned mainly with the private use of the association's capital can be considered as results of 'corruption'. In most of the cases, people's motivation for the private use of collective resources was linked to kinship; the money was usually used to assist other family members. The way other association members accept these cases of free riding is astounding.

Finally, we must also underline the lack of skills in accounting, which led to accounting errors and capital misappropriation. The evidence we thus far was

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<sup>19</sup> Here we can refer to the debate, that mainly developed in the 70s, over the persistence of social relationships in the realm of economic transactions and on the existence of a 'moral economy' [Hyden, 1983]. See also the Scott [1976] vs. Popkin [1979] debate.

discouraging as concerns the relationship between NGOs and the local context. However, we should bear in mind that there were many cases of members protesting against these kinds of dishonesties, members that always paid their membership fees and continued to offer their work. The so-called corruption phenomenon is nevertheless important and it suggests the existence of other reasons which favour its spread or its easy acceptance. The analysis of such evidence is quite complex and would require further field work. Nevertheless, we can affirm that the main problem of the previous Morrumbala projects was the overestimation of existing human capital's, a conclusion that seems to be shared both by local people and by external observers. The evidence also suggests the need to consider in a deeper way the processes through which new associative institutions develop in the district, especially the relationship between innovations and the local context.

The example of corruption is emblematic. For a Western observer the aforementioned cases could be defined as a consequence of corruption and dishonesty, while for the inhabitants of Morrumbala they simply represent the respect of their moral code. The use of the association's capital to help a relative may be the proper way to act for an association member without feeling guilty, indeed on the contrary he may feel guilty if he chooses not to help his relatives. Our hypothesis, that still needs an empirical verification, is that the association model is an innovation, but that pre-existing social models are important to understand what will be the results of the innovative processes it puts in place in rural communities. For example, the distribution and re-distribution practices that are locally accepted could be the result of social norms which tend to be harmful for the innovative association model. The issue of how local people would react to the introduction of an innovation is, in technologically underdeveloped contexts, of primary concern. In Morrumbala, as in many other African contexts, we can identify difficulties in the use of some innovations, for example a long term production strategy, but we can also notice the fascination and appeal to the rural population of modern items such as cars and other symbols of a desirable modernity. The spread and use of innovations in the local context are key issues especially in terms of the results of development projects. A more detailed analysis will be proposed in the last section.

## **5. THE ACTUAL SITUATION OF UDCM**

Our case study is represented by the associations that are part of the UDCM and that we have already introduced; we will now focus mainly on the period that goes from 2006 to 2008. In 2006, the Italian NGO Nexus-Progetto Sviluppo



started a programme to strengthen associative movements in the district of Morrumbala. Beneficiaries of this programme are the producer's associations that were constituted by the aforementioned projects, to which new associations were subsequently added. The main objective of this more recent project is to improve the living and working conditions of farmers, currently organized in associations according to the geographical part of the district to which they belong. Together, they constitute the UDCM, the local partner of this initiative. As outlined in the previous chapter, the main working methodology used in the district envisaged the creation of groups of people as a condition to participate in development projects. Creation of such groups does not necessarily constitute organizations that we can define as cooperatives. The experience previously described shows that the granting of capital goods (tractors, mills, poultry house and warehouses) constitutes a sufficient motivation to pull people together, but it is not enough either to create mechanisms of production and utilization of collective goods or to improve upon the redistributive function of a productive association. Nexus-Progetto Sviluppo, to avoid past mistakes, started from the analysis of the existing situation of the cooperatives and adopted a more participatory work methodology using a much smaller budget and giving more importance to training rather than to the introduction of capital.

In 2006 the associations were analysed with a questionnaire called 'Rural Participatory Appraisal'. It was a list of questions that gave outside observers a picture of the characteristics of the associations involved and was useful to identify the biggest problems according to the associations' members themselves from the point of view of resources and organization. The picture arising from this analysis is quite alarming as only a very small number of associations have the minimum characteristics that would allow them to be considered as cooperatives, notably the presence of social bodies and a democratic election process, the presence of a statute and the registration of the association at the local authority's office. Therefore, one of the first actions taken by Nexus-Progetto Sviluppo was the registration of the associations. The most important problems (in terms of production) revealed by the analysis were the lack of seeds to produce certain crops, very low productivity, the lack of instruments to put to production a sufficiently large crop field, and the unaffordable costs for the preparation of a crop field for cultivation. Particularly difficult was the issue of the commercialization of products mainly because of the scarce presence of warehouses and the fact that commercialization is mainly carried out individually. It is important to note that these are issues that seem to

systematically characterize agrarian ‘poverty traps’ by constraining rural inhabitants at low productivity levels and by preventing incentives to increase productivity.

In order to answer these problems, the NGO created a rotating fund, managed by the UDCM, that allows the financing of several activities realized by the associations or by the UDCM itself. It does not really aim to guarantee the sustainability of the activities but rather at making the beneficiaries understand the credit mechanism through this symbolic value. The applied interest rate is 5% for credit in cash and 25% for credit in goods to be paid at the end of the loan period, e.g. the crop cycle from sowing to harvesting time. It is important to note that the credit does not cover the total cost of the activities but it is added to the funds of the associations to finance these activities. Two credit typologies are used:

1. In cash: a) credit for *lavoura e sacha*, to finance the payment of the labour force necessary during the period of field preparation before sowing and to pull weeds when the crops start growing; b) credit for *negocios* to finance a series of small trade activities; c) credit for commercialization, only given to associations with a warehouse. Associations without a warehouse can store their products in the UDCM warehouse, so that the UDCM will be responsible for the commercialization of those products.
2. In goods: the goal is to introduce or strengthen the production of some crops, in particular sesame, peanuts, maize and *boer* beans.

The UDCM is responsible for coordination, including collecting membership fees, the revenues from commercialization, from renting the rooms in UDCM buildings and from the provision of several training courses for the association members. UDCM staff is elected by the general assembly composed of the president, the vice-president, the treasurer, the secretary, the administration and commercialization manager and the agronomist in charge of the credit in goods. Nexus-Progetto Sviluppo’s goal is to make the associations comprising the UDCM a reference point for the whole community in which they are working and to provide the UDCM with instruments that will allow them to find the proper solutions for the main difficulties of their farmers. The associations constituting the UDCM were created in different years, starting from 1994, and their number has been constantly increasing (see next section). Every association has three social bodies: the general assembly, the fiscal council and the board of governors. Furthermore, every association votes for a president, a vice-president, a secretary and a treasurer.

Since the beginning of the project, there were some improvements in the functioning system of the associations' part of the UDCM: for instance, they are all legally registered and the number of the members and associations has been increasing over time. These are signals that the UDCM has the capacity to attract farmers of this area. The government of the province has also recognized the UDCM as the institution representing the district farmers. The President of the UDCM has been appointed for two years as the Zambezi Valley Authority representative, which includes the provinces of Tete, Zambezia, Manica and Sofala. The data collected by the UDCM and by Progetto Sviluppo - in particular through the 'Participatory Rural Appraisal' - allow us to create a dataset constituting the base of our quantitative analysis.

## 6. DESCRIPTIVE FIGURES OF THE DATASET ON ASSOCIATIONS

We now introduce some preliminary figures from the dataset we built, using the data collected by the UDCM in their periodic monitoring of first-level cooperatives. We managed to access these data thanks to Nexus-Progetto Sviluppo NGO. For the time being, we just have two 'waves' of a panel dataset, that we will enlarge with subsequent waves, as soon as they will be available, in order to have more information on the diachronic evolution of associations.

These first data aim to provide a provisional picture of the cooperatives that are members of the UDCM, starting from their geographical location and from their accessibility, with respect to basic services and infrastructures and to the main urban centre of the area.

Tab. - 1 Average distance of the association from basic facilities.

	MEAN	VARIANCE	MIN	MAX
Distance from water (a)	44,3	54,8	3	300
Distance from primary school (a)	26,9	23,8	2	100
Distance from health care centre (a)	174,9	205,8	5	900
Distance from Morrumbala (b)	193,2	197,8	5	720

(a) = distance measured in minutes on foot; (b) = distance measured in minutes by bicycle.

At first sight, the high variance of these data is striking, suggesting that cooperatives are spread around in a vast area. The less diffused welfare service seems to be the health care one: on average, almost a 3 hours walk is needed in order to reach a *posto de saude*. The distance from Morrumbala (the main urban centre of the district) is also high (more than 3 hours by bicycle). However, these are subjective measures of the distance that may present a non negligible error with respect to real topographic information.

For what concerns the evolution between the beginning of the cooperative promotion project by the Nexus-Progetto Sviluppo NGO and the following monitoring survey, one year later, the increase in the number of associations' members of the UDCM is remarkable: in 2006, they were 27, while in 2007 they were 34. This increase is clearly due to the intervention of the cooperative support project. If we look at the number of associations founded in each year [cfr. Tab. 2], it is striking to notice that the years when most of the associations were founded are the same ones in which some international cooperation programs started.

As we can see from Table 3, both the total number of members and the average number of members per association increased in 2007 with respect to 2006. The average number of members went from 28 to 42; if we perform a t test on mean differences, the difference between the average number of members is significant at a 95% level.

Tab. – 2 Number of associations founded in each year.

1994	1995	1996	1997	1998	1999	2002	2003	2005	2006	2007
1	2	2	9	4	4	1	1	2	7	1

The average percentage of women in each cooperative has also increased from 37,9% to 47,7% (again, by performing a Ttest, this difference shows to be significant at a 99% level). On the contrary, the average number of literate people, that is those declaring to be able to read and write, does not change much, and indeed the difference between the 2006 mean and the 2007 mean is not significantly different from zero. On average, 27-28% of members are literate.

Tab. - 3 Data on associations. Comparison between 2006 and 2007.

	2006	2007
n. of associations members of the UDCM	27	34
n. of total members	737	1039
n. of associations with a statute	3	27
n. of associations legally recognized	1	27
n. of associations with the election of board members	8	27
Average n. of members in each association	28,35	41,56
Average share of women in each association	37,9%	47,7%
Average share of literate people in each association	27,2%	28,1%

In terms of production, we know that the associations' land is almost completely divided into individual fields (*machambas*) that have an average

extension of a little less than 2 hectares per member. Moreover, we have two interesting data: the number of cultivated crops, and the number of members in each cooperative that produce, sell, and buy every single crop.

The number of cultivated crops seemed to decrease a little between 2006 and 2007, but it's not a statistically significant difference. Ten crops that proved to be the most relevant<sup>20</sup>. Given that the average number of cultivated crops is around ten (cfr. Tab. 4), it is reasonable to think that every association produces all of them; at this very preliminary observation stage, this could stand for low productive specialization among groups.

Tab. - 4 Average number of cultivated crops in each association, in 2006 and 2007.

	MEAN	VARIANCE	MIN	MAX
2006	11,8	5,8	0	22
2007	10,4	5,3	0	18

The data we have, unfortunately only for 2006, allow us to try and build up an indicator of self-sufficiency in agricultural production. The information about the number of members that produce and the number of those who buy each of the 10 main crops suggests that members may not produce enough of those crops to satisfy their needs; for this reason, they may be obliged to buy the same product that they are producing. However, on the contrary, this may be a consequence of productive specialization within the cooperative (some members produce that crop, and others buy it).

We thus build up a self-sufficiency indicator as follows<sup>21</sup>: we construct a dummy variable, that takes the value of 1 when the number of those who buy product X is less than the number of those who do not produce it. It means that it may possibly be the case for productive specialization: the set of those who buy product X may be a subset of those who don't produce it. On the contrary, our dummy takes a value of 0 when those who buy the crop are more than those who do not produce it (there is someone who produces the crop, but not enough to fulfil his needs). The value of 1 of our dummy variable means 'it is

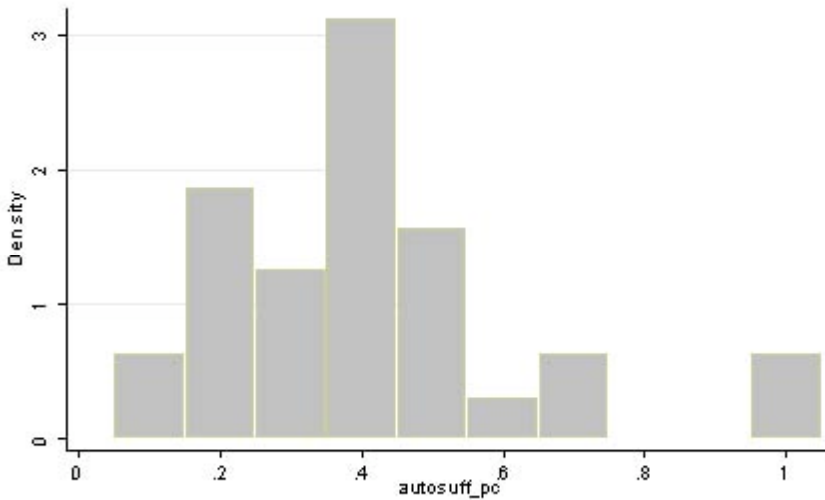
<sup>20</sup> Sesame, *manteiga* bean, rice, peanut, maize, millet, cotton, *boer* bean, *nhemba* bean, cassava.

<sup>21</sup> The source of these data is the Participatory Rural Appraisal carried on by UDCM and Nexus NGO mainly in 2006. We don't have the information on the exact amount of each crop that is produced or bought. We just know how many association members do produce or buy it, but we know that they are regular producers or buyers, and not occasional ones.

possible that all members are self-sufficient regarding that crop' (we cannot exclude that they are), while the value of 0 means that there is definitely a producer, but who is obliged to buy that product again (e.g. he is not self-sufficient).

We then looked at the ratio between the number of crops for which an association is considered to be self-sufficient (in the definition given above), and the number of the main crops (10): the distribution of our 'self-sufficiency indicator', that takes values between 0 and 1, is the following:

Fig. - 1 Histogram of the distribution of the self-sufficiency indicator.



On average, the associations are self-sufficient for 41% of their main crops, but the range of variation of these data is wide. By looking at the distribution, we see that it is skewed to the left, that is most of the observations are in the left side of the distribution (low self-sufficiency). If we look for the determinants of this indicator, we do not obtain significant results, but this may be also due to the limits of our dataset at this stage, making inference difficult. For the time being, we have only highlighted some interesting correlations, calculated using the Spearman correlation index (that allows us not to assume a linear correlation among variables)<sup>22</sup>. Besides a negative correlation with the number of cultivated crops, which is quite intuitive, we see a negative correlation with the association age: the oldest cooperatives are those who have

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<sup>22</sup> We report here only those correlations for which we can exclude, at a confidence level of at least 90%, that the two variables are statistically independent.

a lower number of crops in which they are self-sufficient. On the other hand, the number of crops the cooperative is self-sufficient for is positively correlated with the number of members and the share of women on the total membership. The topics of self-sufficiency, of productive specialization and of integration in market networks may well be some of the parameters for the selection of the associations for the qualitative survey subsample.

## 7. TOWARDS AN INTERDISCIPLINARY APPROACH TO INNOVATION

In this section, we are proposing the outline of an approach for the study of the innovation diffusion process in the rural communities of Morrumbala. The relevance of this issue is crucial in the local context that we are analyzing. As we have already stated, it is important to understand the social process by which new production models and organization systems are accepted or rejected by the Morrumbala district inhabitants. Indeed, the study of this process is important for evaluating projects or for their new implementations. Exchange of the researcher's information with the actors promoting these projects is indeed a primary aim of our research.

As we will try to demonstrate, the issue of innovation is an important object of analysis, lying at the border between anthropological and economic sciences. An interdisciplinary approach could provide important results avoiding the risk of biased interpretation, sometimes emerging in both anthropology and economics. The aim is to focus on the local context using both a qualitative and a quantitative approach in order to produce results that may also be useful in a comparative perspective. As Rao stated, *«by engaging in an anthropological case study, letting that inform a quantitative model of human behaviour, and then conducting a statistical analysis where the hypothesis are tested by means of the quantitative behavioural model, we arrive at a clearer and more holistic view of household decision-making in this community»* [Rao, 1997: 837].

The first step is to underline relevant definitions of innovation. From an economic point of view, Schumpeter's definition is the most interesting: «a new combination of means of production, or a new function of production, generated by spontaneous and discontinuous changes» [Zanini, 2000]. Besides the sphere of production, the Schumpeterian definition includes changes in organization and selling patterns and in market structure, but it clearly stays within the economic field. The definition provided by the anthropologist Olivier De Sardan includes a wider range of phenomena: he states that innovation is *«a graft of new technologies, knowledge and organization's model, on known technologies, knowledge and organization's model»* [De Sardan,

1995: 69]. This second theoretical perspective points out the process-like pattern of innovation diffusion. This means that every innovation will be *grafted* on an already existing cultural system [Amselle, 1990]. Local society must be considered, from a development perspective, as a context in a process of continuous evolution. The process dimension is primary also in economics, especially in the literature focusing on innovation as a “path-dependent” process. The process is not linear, but discontinuous and its engine is the interaction between the variation of system conditions and the actors’ limited rationality [Antonelli, 2003]. The analysis of innovation diffusion must consider those discontinuities that should be understood through an understanding of the local context.

The local context of Morrumbala allows us to face some issues linked to innovation. The first is the agency of the so-called ‘social carriers’ [De Sardan, 1995: 78] that are the individuals that allow the innovation diffusion process in a local context. The second theme is the creation of public knowledge, which is the process through which some members of a social network share information, thus transferring it from the private to the public sphere. In further research these topics will be investigated using a case study methodology. A sample of families will be chosen using the dataset introduced in the previous section. These families will be studied using interviews and participant observation. Beyond the topics that we have already described, with this methodology it will be possible to evaluate the impact of the associations on the life of households affected by the project. The association will be considered as a particular innovation that a family could decide to use or not. In this way, the role of the Morrumbala rural associations will be analyzed from two different points of view. The first issue concerns the possible “returns to innovation”, that is the set of the possible future benefits that a domestic homestead could have after the use of an innovation. After a survey on a sample of domestic homesteads, we will be able to understand if the benefits are a sufficient incentive for adoption. Besides, it will be necessary to investigate the kind of benefit Morrumbala habitants look for. This could be useful also to understand if the benefits are really the same as those that the development agencies assume to be the rewards of joining the associations.

Secondly, we will to understand if the associations are social relationship systems useful to spread information. We will try to understand if and in which way the association members are more inclined to diffuse information. The comparison of the data collected among members and non-members will



provide important results. The issue of construction of public knowledge lies behind both these research lines.

Finally, we will try to investigate the issue of risk sharing. During the survey it will be possible to understand what are the kinds of risk perceived in the local context. Indeed, as in many African contexts, the risk issue is linked to other important spheres of social life, for example religion. The relationship between the benefit derived from the use of the innovation and the way in which information is shared and spread will be useful to understand if the risks are shared or not.

## REFERENCES

- Alchian, A.A. and Demsetz, H.  
1972 "Production, Information Costs and Economic Organization", in *The American Economic Review*, 62(5), pp. 777-795.
- Amselle, J.-L.  
1990 *Logiques métisses. Anthropologie de l'identité an Afrique et ailleurs*, Paris: Éditions Payot; (trad it., *Logiche meticcie. Antropologia dell'identità in Africa e altrove*, Torino: Bollati Boringhieri, 1999).
- Antonelli, C.  
2003 *The Economics of Innovation. New Technologies and Structural Change*, London: Routledge.
- Baland, J.M. and François, P.  
2003 *Commons as Insurance and the Welfare Impact of Privatization*, Working Paper Cred, FUNDP, Namur.
- Bardhan, P.  
2005 *Scarcity, Conflicts and Cooperation*, Essays in the Political and Institutional Economics of Development, Cambridge: MIT Press.
- Bernard, T., de Janvry, A. and Sadoulet, E.  
2005 *Do Community Sharing Norms Constrain the Emergence, Configuration, and Activities of Market-Oriented Organizations? A Study for Burkina Faso*, Draft.
- Bonin, J.P., Jones, D. and Putterman, L.  
1993 "Theoretical and Empirical Studies of Producer Cooperatives: Will Ever the Twain Meet?", in *Journal of Economic Literature*, 31(3), pp. 1290-1320.

Bowles, S. and Gintis, H.

1994 "The Distribution of Wealth and the Viability of the Democratic Firm", in U. Pagano and R. Rawthorn (eds), *Democracy and Efficiency in the Economic Enterprise*, London: Routledge and Unu/Wider.

Carter, M.

1987 *Risk-sharing and Incentives in the Decollectivization of Agriculture*, Oxford Economic Papers, 3, Oxford.

De Janvry, A. and Sadoulet, E.

2004 *Organisations Paysannes et Développement Rural au Sénégal*, Rapport pour la Banque Mondiale, Janvier.

De Sardan, O.

1995 *Anthropologie et développement. Essai en socio-anthropologie du changement social*, Paris: Khartala; (trad it., *Antropologia e sviluppo*, Cortina: Milano, 2008).

Dore, R. F.

1971 "Modern cooperatives in traditional communities", in P. Worsley (ed), *Two blades of grass. Rural cooperatives in agricultural modernization*, Manchester: Manchester University Press.

Fafchamps, M.

2003 *Rural Poverty, Risk, and Development*, London: Elgar Publishing.

Hansmann, H.

1996 *The Ownership of Enterprise*, Cambridge/London: The Belknap Press of Harvard University Press; (trad. it., *La proprietà dell'impresa*, Bologna: Il Mulino, 2005).

Haubert, M.

1981 "De la tradition communautaire à la modernité coopérative: évolution, greffage ou récupération?", in *Revue Tiers Monde*, 88, pp : 769-808

Holmström, B. and Milgrom, P.

1994 "The Firm as an Incentive System", in *The American Economic Review*, 84(4), pp. 972-991.

Hyden, G.

1983 *No Shortcuts to Development: African Development Management in Perspective*, Los Angeles: University of California Press.

Isaacman, A. F.

1972 *Mozambique. The Africanization of a European Institution. The Zambesi prazos, 1750-1902*, Madison: University of Wisconsin Press.

Jensen, M. and Meckling, W.

1976 "Theory of the Firm: Managerial Behaviour, Agency Costs and Ownership Structure", in *Journal of Financial Economics*, 3(4), pp. 305-360.

Jossa, B.

2005 *La teoria economica delle cooperative di produzione e la possibile fine del capitalismo*, Torino: Giappichelli.

Jossa, B. and Cuomo, G.

2000 *La teoria economica del socialismo e l'impresa autogestita. Mercati, socialismo e autogestione*, Torino: Giappichelli.

Levi, Y.

1998 "Beyond traditional models: multi-stakeholders cooperatives and their differential roles", in *Journal of Rural Cooperation*, 26, pp. 49-64.

Luzzati, E.

2002 "Il cooperativismo comunitario nei Paesi in Via di Sviluppo: riferimenti teorici ed esperienze concrete", in L. Bruni e V. Pelligra (a cura di), *Economia come impegno civile. Razionalità, benessere ed economia di comunione*, Roma: Città Nuova.

2009 "Quelles organisations paysannes pour quel développement dans le Sahel? Une comparaison entre Sénégal et Burkina Faso", in E. Dansero, E. Luzzati, S. Seck, *Organisations paysannes et développement local dans les PVD, Leçons à partir du cas du Delta du Fleuve Sénégal*, Torino, L'Harmattan.

Luzzati, E. and Navarra C.

2004 "As Cooperativas como Instrumento de luta à pobreza nas países em vias de desenvolvimento. O caso de Moçambique", in *Quaderni della Cooperazione Italiana*, 5, Maputo, Ambasciata d'Italia.

Ministério da Administração Estatal

2005 *Perfil do Distrito de Morrumbala, Província da Zambézia*, República de Moçambique, Maputo.

- Negrao, J.  
2005 *Cem anos de economia da famiglia rural africana, O delta do Zambeze em analise retrospectiva*, Texto Editores.
- North, D.  
1990 *Institutions, Institutional Change and Economic Performance*, Cambridge: Cambridge University Press.
- Pagano, U.  
1989 *Property Rights, Asset Specificity, and the Division of Labour Under Alternative Capitalist Relations*, Working Paper 95, Dipartimento di Economia Politica, Siena: Università di Siena.
- Papagno, G.  
1972 *Colonialismo e feudalismo. La questione dei Prazos da Coroa nel Mozambico alla fine del secolo XIX*, Torino: Einaudi.
- Platteau, J-P.  
2000 *Institutions, Social Norms and Economic Development*, Amsterdam: Harwood Academic Publishers.
- Platteau, J.P. and Seki, E.  
2001 "Community arrangements to overcome market failures: pooling groups in Japanese fisheries", in M. Aoki and Y. Hayami (eds.), *Communities and markets in economic development*, Oxford University Press, London.
- Popkin, S.L.  
1979 *The Rational Peasant: The Political Economy of Rural Society in Vietnam*, Berkeley and Los Angeles: University of California Press.
- Putterman, L.  
1986 *Peasants, Collectives, and Choice: Economic Theory and Tanzania's Villages*, New York: JAI Press.
- Rao, V.  
1997 "Can Economics Mediate the Relationship Between Anthropology and Demography", in *Population and Development Review*, 23(4), pp. 833-838.
- Saul, D.  
1981 *Glossario toponòmico, històrico-administrativo e etnografico de Moçambique*, Lisboa.

Schumpeter, J.A.

1911 *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest and Business Cycle*, Cambridge MA: Harvard University Press.

Scott, J.

1976 *The Moral Economy of the Peasant*. New Haven and London: Yale University Press.

Williamson, O.E.

1985 *The Economic Institutions of Capitalism*, New York: The Free Press.

Zanini, A.

2000 *J.A. Schumpeter. Teoria dello sviluppo e del capitalismo*, Milano: Mondadori.



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