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M.Sc. Agrarökonomik (Agricultural Economics) Final Thesis



# **The Role of Services for Small Farmers' Agricultural Growth**

A study of Maddur taluk, in Mandya district, Karnataka, India

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## ACRONYMS

APM	Agricultural Produce Marketing Committee
APL	Above Poverty Line
BMZ	German Federal Ministry for Economic Cooperation and Development
BPL	Below Poverty Line
CACP	Commission on Agricultural Costs and Prices
CBs	Commercial Banks
CBOs	Community-Based Organisations
CPO	Chief Planning Officer
DCCB	District Central Cooperative Bank
FFIs	Formal Financial Institutions
GoI	Government of India
GP	Gram Panchayat
HYVs	High Yielding Varieties
IAD	Institutional Analysis and Development Framework
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
IRDP	Integrated Rural Development Programme
MDGs	Millennium Development Goals
MFIs	Micro Finance Institutions
NABARD	National Bank for Agriculture and Rural Development
NGOs	Non-Governmental Organisations
PRA	Participatory Rural Appraisal
PRIs	Panchayat Raj Institutions
OBC	Other Backward Class
OECD	Organisation for Economic Co-operation and Development
PACs	Primary Agriculture Cooperative Societies
RCBs	Rural Commercial Banks
RBI	Rural Bank of India
RRBs	Regional Rural Banks
RSP	Rural Services for the Poor Project
SAPs	Structural Adjustment Programmes
SCBs	State Cooperative Banks
SHG	Self Help Group
SC/ST	Schedule Casts/Schedule Tribes
SDCs	School Development Committees
TP	Taluk Panchayat
V.S.S.B.N.	Vyvasaya Seva Sahakara Bank Niyamila
ZP	Zilla Panchayat

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## **Abstract**

Improving the livelihoods of people living in rural areas and reducing poverty levels are issues of paramount importance for many developing countries. Small farmers' agricultural growth has in the past successfully demonstrated to be a potential driver of overall rural development. Supporting such growth in an equitable and sustainable manner is an ambitious task that public and private sectors, as well as civil society, have to address. Improving rural service provision, especially of market-related services, has a positive impact on enhancing small farmers' agricultural productivity and strengthens their linkage to markets. Different provision of services is one of the factors explaining why some economies have ended up on significantly different paths of development. Areas that experience weak service provision are often affected by market and government failure. India is one remarkable example of highly variable results in terms of service provision, levels of poverty and development. Large gaps exist between states and regions across the country. Differences in performance are also affected by characteristics of the local context. The study tries to analyse and explain the complex process of development of two Indian rural villages that are currently traversing different stages of the development process. Looking at what works, where and why in rural service provision (especially of market-related services), the study suggests strategies for improving small farmers' agricultural growth. Findings demonstrate that policy-phases need to be context-tailored and adapted overtime in order to lead to effective and efficient results. A favourable institutional environment is a prerequisite for investments in infrastructure and other institutional arrangements to succeed. Those strategies should ultimately create conditions that can spur agricultural growth and overall rural development in an equitable and sustainable manner.

# **PART I**

## **Theoretical and Analytical Part**

# CHAPTER 1

## PROBLEM STATEMENT AND OBJECTIVE OF RESEARCH

### ***1.1 Background***

#### *1.1.1 Rural service provision and the millennium development goals*

'Eradicate poverty and hunger' is set as the first priority of the countries committed to the Millennium Development Agenda<sup>1</sup>. Recognising that economic growth alone is not enough to achieve the Millennium Development Goals (MDGs), other factors are assumed to be important to foster economic and human development and reduce poverty in its multiple facets. The effective provision of economic and social services in rural areas, where the majority of the poor people live in developing countries, can be considered as one of such factors. Improving access and quality of rural services can spur agricultural growth (Hazell and Ramasamy, 1991), improve food security and lead to broad-based alleviation of rural poverty (Diao et al., 2006: 10).

To attain agricultural development, it has to be ensured that poor people have access to physical infrastructure, such as irrigation, roads and electricity, together with key agricultural services such as credit, input supply and output markets (Wanmali, 1991: 213). Only with appropriate rural service provision will it be possible to achieve agricultural-led development. This has been the experience of many Asian countries such as Indonesia, Malaysia, South Korea and Japan, which exhibited high rates of agricultural growth after periods of Green Revolution and strong investments in rural infrastructure (Hazell and Ramasamy, 1991). Yet, there are countries such as India where this approach has not been as

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<sup>1</sup> Millennium Development Agenda: global framework for development decided in the past two decades of United Nations conferences and summits. "The Agenda encompasses inter-linked issues ranging from poverty reduction, gender equality, social integration, health, population, employment and education to human rights, the environment, sustainable development, finance and governance" (DESA, 2007). The Millennium Development Goals (MDGs) are an integral part of the agenda.

successful as in the neighbouring countries. Although one of the ten fastest growing economies in the world, with a GDP growth of 8,5 percent in the past four years (World Bank, 2008), its levels of poverty are still high and widespread throughout the country, especially in rural areas. In India, small-farmers lack adequate access to services (Diao, 2006: 21), above all credit, inputs and outputs markets, which are essential market-related services for small-farmers' production growth.

### *1.1.2 Provision of services and poverty patterns in India and Karnataka*

India has observed steady poverty reduction rates during the period of exceptional agricultural growth following the Green Revolution. Government intervention has been pervasive in all agriculture-related services and a lot of resources have been spent in rural infrastructure. After the initial success of such policies, revealed in rapid increases in agricultural outputs, the pace of growth decelerated and the large scale public sector intervention was revealed to be an unsustainable policy. In the 80s such awareness was accompanied with a new development scenario brought by the Structural Adjustment Programmes (SAPs)<sup>2</sup>, characterised by a drawback of the central role of the state. At the beginning of the 90s the country experienced a sustained agricultural growth across states, particularly in eastern states which traditionally showed to be highly populated and with high levels of poverty (Jha, 2001). This was the result of a remarkable production increase in non-food grains, such as oilseeds, and again of decisive investments in rural infrastructure in the post-independence era (World Bank, 1998a: 8). Nowadays, following the failure of unsustainable government intervention, which turned out to be not sustainable, and the need for institutional reforms, India has embarked on an ambitious process of decentralisation which is intended to create more effective systems to reflect local people's needs and interests (Johnson, 2003: 3). This is also expected to improve also service provision. The attempt is to fill the gap left by a lack in convincing economic and agricultural reforms which have inhibited a sustained growth for agricultural-driven rural development in the country (see section 2.2.2).

As far as poverty levels are concerned, poverty in India is still widespread, with 33,5 percent of the population living below poverty line (World Bank, 2007). The distribution of poverty is also very unequal (ibid), with states such as Punjab having poverty levels (2,4 percent)

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<sup>2</sup> SAPs: set of major economic reforms promoted by the Bretton Woods institutions, the International Bank for Reconstruction and Development (IBRD or generally WB) and the International Monetary Fund (IMF). They followed a neo liberal market-oriented philosophy, which prompted privatisation of state-owned enterprises, fiscal stabilisation, macroeconomic liberalisation, and the striving for foreign direct investment (Burnell, 1997).

almost 20 times lower than the poverty rates of Orissa (see annexes). In Karnataka, the government of India has identified 3,129,000 Below Poverty Line (BPL) families, whereas state agencies show that the number of BPL families is close to 6,283,000 (Rao, 2003: 80).

Therefore, despite the remarkable efforts, India has still a long way to go to respond to new demands for core services (namely infrastructure, social and market-related services) given from improved economic conditions, and to reduce poverty in rural and urban areas. Institutional reforms are required to improve the capability of the public sector to effectively deliver core services and reduce the existing gap between the access and quality of those services (Paul et al. 2004). Among the institutional reforms, decentralisation is conceived as an important instrument to achieve the objective of improved access and quality of service delivery.

### *1.1.3 The role of decentralisation policies*

As stated in a recent IFPRI article (IFPRI, 2007: 9) “when it works properly decentralisation can help to alleviate poverty and food security by providing infrastructure and services that poor people require, like drinking water, roads, schooling and health care”. Governments’ action, being closer to the people, can be more effective and responsive to people’s needs and interests, especially in rural remote areas, where “decentralisation can be the single most important governance reform” (Birner in IFPRI, 2007<sup>3</sup>).

Numerous studies have been carried out to analyse the impact of decentralisation on poverty reduction (e.g. Jütting, 2004; Crawford and Hartmann, 2008). Two major arguments in favour of decentralisation for poverty reduction, maintain that decentralisation increases government allocative efficiency (Musgrave, 1983 and Oates, 1972 in OECD, 2004) since people’s preferences are better reflected by government policies, and can help to increase government accountability. Closer controls on decision-makers actions can in fact reduce their rent-seeking behaviour and motivate them to increase their legitimacy in front of voters (Blair, 2000; Crook and Manor, 1998; Manor, 1999 in OECD, 2004).

Whether decentralisation can really make a difference in the reduction of poverty is still a rather open question. The results from past experiences have been mixed (World Bank, 2003) and there are various studies which show how the impact of decentralisation depends on several conditions. One recent OECD work (2004) argues that on the one side those conditions are related to the country situation in terms of physical characteristics (such as

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<sup>3</sup> Part of an interview.

population density), capacity of decision-makers, functioning of local institutions, and political power structures; on the other, to the level and process of decentralisation, capacity (e.g. availability of financial resources or personal qualifications) and commitment to carry out reforms, elite capture and corruption, and the level of participation of the people involved in the decentralisation process (OECD, 2004: 12). Still in the same study, the performance of different countries that in the past introduced decentralisation reforms has been analysed. The result was that just one third of the countries taken into consideration observed somewhat positive results (see Figure 1.1).

**Figure 3.1 Decentralisation and impact on poverty**

Positive	Somewhat positive	Somewhat negative	Negative
Bolivia	China	Paraguay	Guinea
Philippines	South Africa	Brazil	Mozambique
India (West Bengal)	Mexico	Nepal	Malawi
	Ghana	Vietnam	India (Andhra Pradesh)
		Egypt	India (Madhya Pradesh)
		Sri Lanka	
		Ethiopia	
		Burkina Faso	
		Uganda	

Source: OECD, (2004): 14

The following conclusions have been (partially) drawn from these results: decentralisation works better when the process is built on existing well-functioning local structures, the local governments have sufficient financial resources and can decide on their use. In cases of relatively more developed countries (West Bengal is an exception), higher literacy rates and low levels of corruption are achieved (ibid p.18).

One of the channels through which decentralisation has an impact on poverty refers to the role that well-functioning local governance forms can have on improving the effectiveness and equitability of access to services. Improving service delivery is one of the main reasons that moves governments towards decentralisation (Ahmad et al., 2005: 1). The common opinion is that through better targeted and efficient public spending, better results will be achieved. However, drawn from mixed experiences in the level of decentralisation implemented by different countries, there has also been increasing consensus that not all the services have to be decentralised, since some of them might benefit from economies of scale (e.g. loss of economies of scale in water and sanitation services after decentralisation have been observed in some countries of Latin America), or from spillovers if managed at the central level (IFPRI, 2007). Moreover, depending on the type and features of the service,

decentralisation might be introduced at different times and levels<sup>4</sup>. Some services require fiscal decentralisation but central decisions on the political and administrative level, for others it might be better the contrary, or decentralisation at all levels. If a service happens to become fully decentralised, there is who argues that political and administrative decentralisation should precede fiscal decentralisation to ensure that increased political participation and accountability has already taken place (Von Braun<sup>5</sup> in IFPRI, 2007). If transparency in decision-making is lacking and people have not increased their level of participation and awareness in demanding services, there is usually low satisfaction of the provided services. As Birner has observed in a study on Gram Panchayats and poverty in Karnataka, the provision of drainage systems was perceived as unsatisfying both in access and quality, and one-third to one-half of the villagers did not know who was providing the service (Birner in IFPRI, 2007).

The observations drawn on the role of decentralisation on service provision are valid also in the Indian context. Indian states are experiencing large differences in the levels and performance of decentralisation. Karnataka is seen as a one of the most advanced examples of decentralised governance in its administrative, political and fiscal dimension and substantial literature has been produced on the issue (see section 2.2.2).

## ***1.2 Rural Service for the Poor project and contribution of the study***

The 'Making Rural Services Work for the Poor'<sup>6</sup> (RSP) project's overall goal is to improve the standard of living of poor households through agriculture and rural development. Recognising the importance for an effective provision of good quality services to attain such pro-poor agricultural growth, one that is able to reach even the poorest parts of the local communities in rural areas, the project aims to provide policy relevant knowledge for strategies to increase the capability of service providers to deliver services and the capacity

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<sup>4</sup> Different levels of decentralisation:

*Political decentralisation* transfers policy and legislative powers from central government to autonomous, lower-level assemblies and local councils that have been democratically elected by their constituencies.

*Administrative decentralisation* places planning and implementation responsibility in the hands of locally situated civil servants and these local civil servants are under the jurisdiction of elected local governments.

*Fiscal decentralisation* accords substantial revenue and expenditure authority to intermediate and local governments. (Source: World Bank, 2000a: 3).

<sup>5</sup> Von Braun: citation.

<sup>6</sup> Making Rural Services Work for the Poor project is a research project jointly coordinated by the Humboldt University Berlin and the International Food Policy Research Institute in Washington. The project has three years duration and it is financed by the Bundesministerium fuer Entwicklung und Zusammenarbeit (BMZ).

of the local communities to demand services they need, through their greater participation in local governance mechanisms.

The project offers a comparative study among four countries, namely India, Uganda, Guatemala and Kirgizstan<sup>7</sup>, that aims to draw conclusions on the open terrain of research. Quantitative data collected by IFPRI (see section 4.1.1 on sources of information) will be combined with qualitative data provided by the Humboldt University counterparts.

The research project is expected to provide answers on how to effectively and efficiently provide rural services to poor and vulnerable people in rural areas at different stages of rural transformation in order to make agricultural-led development and poverty reduction possible (project proposal, 2007: 4<sup>8</sup>). It will “apply a cross-sectoral approach and analyse the range of services that are most important for a successful rural transformation: rural water supply, education and health, transportation and communication, agricultural advisory services, and market-related services such as input supply, agricultural credit and marketing” (ibid: 5). Moreover, it will provide policy suggestions on how public, private and third sector can collaborate together to finance and deliver rural services.

The present study is embedded in the quantitative-qualitative project effort of providing knowledge on the role of rural services in the development process, and focuses particularly on the importance that market-related services have in triggering small farmers’ agricultural growth. The case study part will identify the stage of development of the two target villages and provide arguments explaining why they are placed at different levels along the path towards agricultural growth and rural transformation. The findings aim to understand what contributes to improved rural service delivery and how agricultural-led development and poverty reduction can be achieved.

### ***1.3 Problem statement and objective of the study***

It is a common phenomenon that services fail to reach poor people in access, quality and quantity (World Bank, 2004: 1). In the past decades, the Government of India (GoI) has made exceptional efforts to try to improve effectiveness and quality of economic and social service provision in rural and urban areas of the country; still, in many cases large segments of the

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<sup>7</sup> Countries selected according to specific criteria related to the project-purpose, such as countries with increased variation in level of development and with relevant local governance reforms, and practical reasons, such as availability of secondary data.

<sup>8</sup> I thank IFPRI and the Humboldt University counterparts for the access to the document.

rural areas, where most of the poor live, are not effectively benefiting from basic service provision, and where services are present, people are not satisfied by the quality of the service provided. Governance reforms and institutional innovations in many developing countries, India included, are supposed to be solutions to the problem but no universal answer has been found. Internal reforms, decentralisation or public-private partnerships are only some of the governance reforms that have been introduced with mixed results. The role of the state and the extent of its policy intervention have also been questioned. Through a case study approach, this study will provide empirical evidence on why the effective provision of particular services has been determinant to create conditions for the greater level of agricultural and rural development of one village compared to the other and which strategies should be applied to improve effectiveness and quality of market-related services.

### ***1.4 Main research questions***

The core questions of research will be discussed using the theoretical explanations and empirical evidence provided by the literature on the topic together with data and information gathered during the field work. The field research responds to the need of baseline data at the household level, in order to comprehensively examine which are the factors and strategies that improve the efficacy and sustainability of agricultural service provision. The first main question (followed by hypothesis) the study tries to answer is a general question on the relationship between services and development:

*Q: What has led one village to achieve a higher level of development?*

H: There is a particular pace of development which affords different services at different stages in development. Major irrigation facilities, access to land and infrastructure, profitable intensive technology and education are basic assets in the process of development. Once they are established, productive services such as sound and widespread access to agricultural credit, reliable (on-time) input supply systems and efficient output markets do play a major role for increasing farmers' volumes of finance, input demand and produce supply that can lead to agricultural growth and generate non-agricultural growth linkages. Differences in the availability and performance of such assets and services have been determinant in making the two villages follow different institutional and technological paths and ultimately achieve different levels of development.

The second research question focuses on market-related services which are expected to be crucial for small farmers' agricultural growth and it is formulated as follows:

*Q: What strategies can lead to effective and equitable market-related service (agricultural credit, input and output markets) delivery for small farmers' agricultural growth?*

H: Rural markets are characterised by major constraints that challenge the profitability of investments from the private sector. The building of a sound institutional environment and the introduction of appropriate 'context-tailored' institutional arrangements are two fundamental strategies that can lead to more effective and equitable market-service delivery, increasing agricultural productivity and overall rural development.

Other side issues are at the same time subject of the study. These provide empirical evidence on related matters such as:

i) Which services are delivered by service providers and what is actually the access and quality to rural services according to different socio-economic categories (large, medium and small farmers, marginalised communities such as Schedule Casts and Other Backward Classes)?

ii) Who are those actors providing services, and what are their potentialities and constraints? Institutional mapping of the stakeholders and the potential relationships among them is used to depict the overall picture.

iii) Did governance reforms such as decentralisation play a role in improving the provision of services? If yes, for which services and how? The question will be answered both by looking at the effect of decentralisation on the provision of public services in general (such as basic infrastructure) and also on market-related services.

iv) Are there synergies among services? Does the improved access and quality to one service affect another service?

v) Are women and marginalised groups taking part in the increased benefits coming from better access and quality to services?

vi) Is the local community demanding for greater accountability in the provision of services? Is it empowered enough to take part in any decision-making process?

Data collected during the field work enable to give some important insights on those issues and will be combined with already available knowledge and other examples presented in the literature.

## ***1.5 Structure of the study***

The study is divided in two parts, a theoretical (chapters I to III) and an empirical part (chapters IV to VII). After the introductory chapter on the study framework and objectives, the second chapter will deal with the literature review regarding the relationship between services and development, using theoretical explanations and empirical findings. The sections included in the second chapter will provide an expose on the role of agriculture in development, stages in rural development, Indian agriculture and present agricultural policies, the role of different services in different levels of development, the importance of market-related services for small farmers' agricultural growth (their potentialities, synergies and constrains) and finally the role of grassroots institutional arrangements in the provision of market-related services. The third chapter defines a framework used to analyse the action situation. The fourth chapter illustrates the methodology which has been applied during the course of the study, with particular attention to the field study approach. The fifth and sixth chapter provide an analysis and explanation of what is working, where and why in service provision, with a particular focus on services provided in financial, input and output markets. The two chapters also offer explanations on why one village has developed more than the other. The study concludes with policy suggestions from the literature review and from empirical evidence and with recommendations for policy-makers and further studies.

# CHAPTER 2

## LITERATURE REVIEW: RURAL SERVICES AND DEVELOPMENT

### Theoretical explanations, empirical findings and political intervention

*"We reaffirm that food security and rural and agricultural development must adequately and urgently be addressed...we deem it necessary to increase productive investment in rural and agricultural development to achieve food security".*

World Summit, 2005<sup>9</sup>

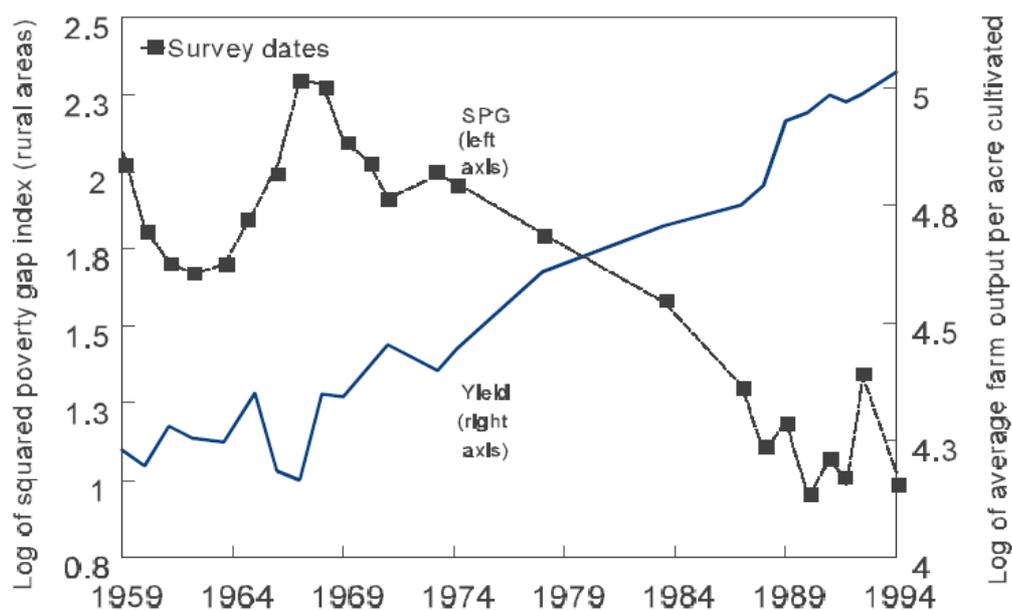
### ***2.1 Agriculture for development***

There is a wide range of literature on the role that agriculture can play for pro-poor growth in developing countries (Tendulkar, 1990; Hazell and Ramaswami, 1991; Sen, 1997; Ravallion and Datt, 1995; Dorward et al., 2004; Diao, 2006). In India, agriculture counts for one third of the national income and more than two thirds of the total work force is engaged in agriculture. Around 80 percent of the people in India live in rural areas and strongly rely on agricultural outputs for their livelihoods (Rao, 2005: 27). It is therefore important to understand the impact that changes in agricultural production can have on the overall development of rural areas and consequently on the reduction of rural poverty.

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<sup>9</sup> Final Communiqué of the World Summit 2005: [http://www.un.org/ga/59/hlpm\\_rev.2.pdf](http://www.un.org/ga/59/hlpm_rev.2.pdf).

**Figure 4.1a Squared Poverty Gap and Average farm Yield, Rural India 1959-94**

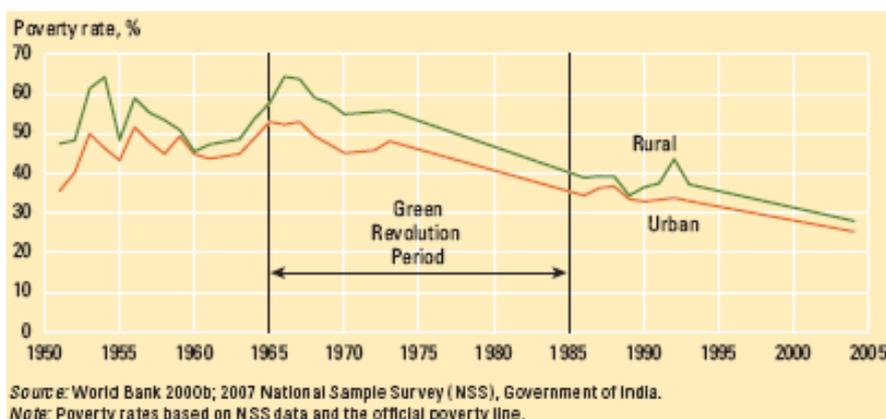


Source: Datt and Ravallion, 1998 p. 11

From the study conducted by Datt and Ravallion, as shown in the figure 2.1a, emerges that higher yields combined with higher wages are normally associated with a reduction in rural poverty (Datt and Ravallion, 1998: 14). The thesis argued by Datt and Ravallion on the association between higher levels of output and lower levels of poverty was first analysed by Ahluwalia (1978), who regressed measures of rural poverty using 12 samples in the period between 1957-54 against agricultural output per head of the rural population and a time trend (Datt and Ravallion, 1998: 22).

Small-farmers' productivity increase is supposed to be the driving force for wider economic growth and poverty reduction. In India, high rates of economic growth were observed whenever the agricultural sector performed well (Ninan, 2000: 5), especially from the second period of the Green Revolution between 1969-70 until 1986-87 (see figure 2.1b). In addition, the government of India started from the end of the 70s to devolve increasing funds to poverty reduction programmes, such as rural poverty and employment programmes (Fan, Hazell and Thorat, 1999: IX). This contributed as well to the decline in poverty levels during those years. At the beginning of the 90s, poverty levels registered a new rise following the age of Structural Adjustment Policies (SAPs), which determined an incisive withdrawal of government investments and a reduction of its regulating role (see section 2.2.2).

**Figure 2.1b: Changes in the incidence of poverty in India, 1951-93**

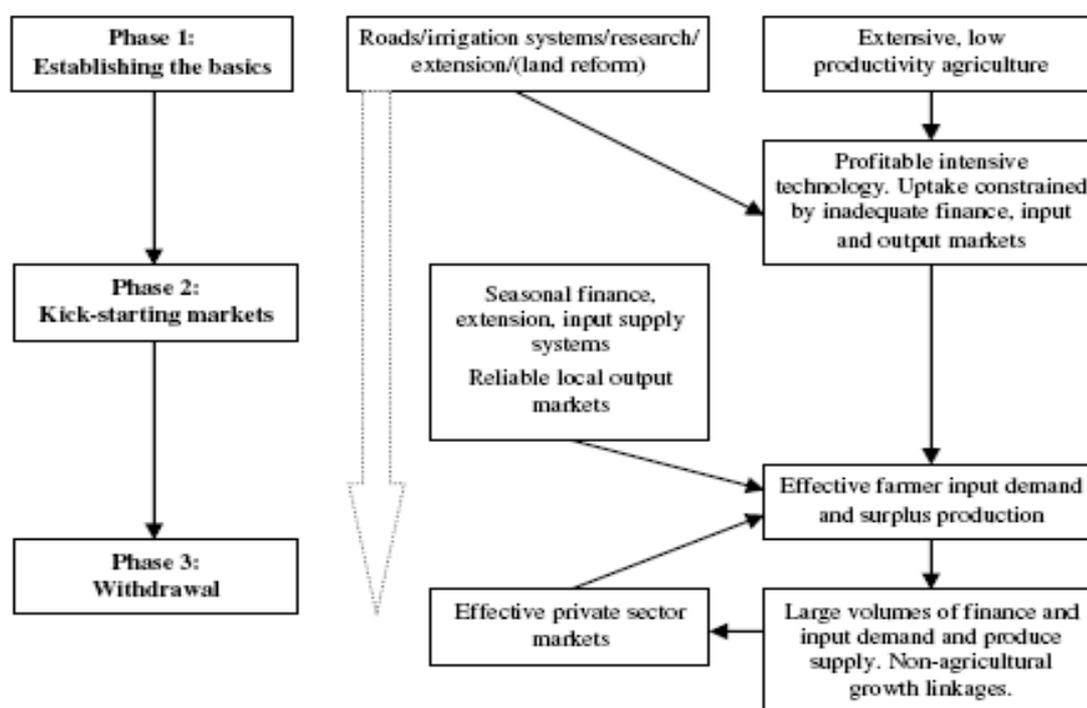


Source: World Bank, 2008: 46

However, in order to use agriculture as a mean to promote economic development in agrarian-based countries, agricultural reforms are needed to spur productivity in smallholder farming. As the new World Development Report (World Bank, 2008: 93) states, “the heterogeneity of smallholders, some market-oriented and some subsistence-oriented, calls for differentiated agricultural policies that do not favour one group over the other, but that serve the unique needs of all the households while speeding the passage from subsistence to market-oriented farming”. A recent debate (see section 6.3) is now emerging on which role the public and private sector and civil society are called to perform to improve services that affect the productivity and sustainability of smallholder farming in the present agricultural development scenario (World Bank, 2008: 10). There is increasing recognition that the private sector should take over and replace the state for a more effective provision of services (Dorward et al., 2004). However, market failures hinder the private sector’s intervention; lack of appropriate institutions are a characteristic of markets in poor rural areas, and high transaction risks and costs might prevent the private sector to intervene into those ‘ill’ markets.

What figure 2.1c illustrates is an attempt to depict different phases of policy support at different stages of development that are needed to stimulate small farmers’ agricultural growth, lead to agricultural transformation and overall economic growth (Dorward et al., 2004: 615). Infrastructure, technology and market contributions (in financial, input and output markets) are associated to different phases of development (ibid).

**Figure 2.1c: Policy phases supporting agricultural transformation**



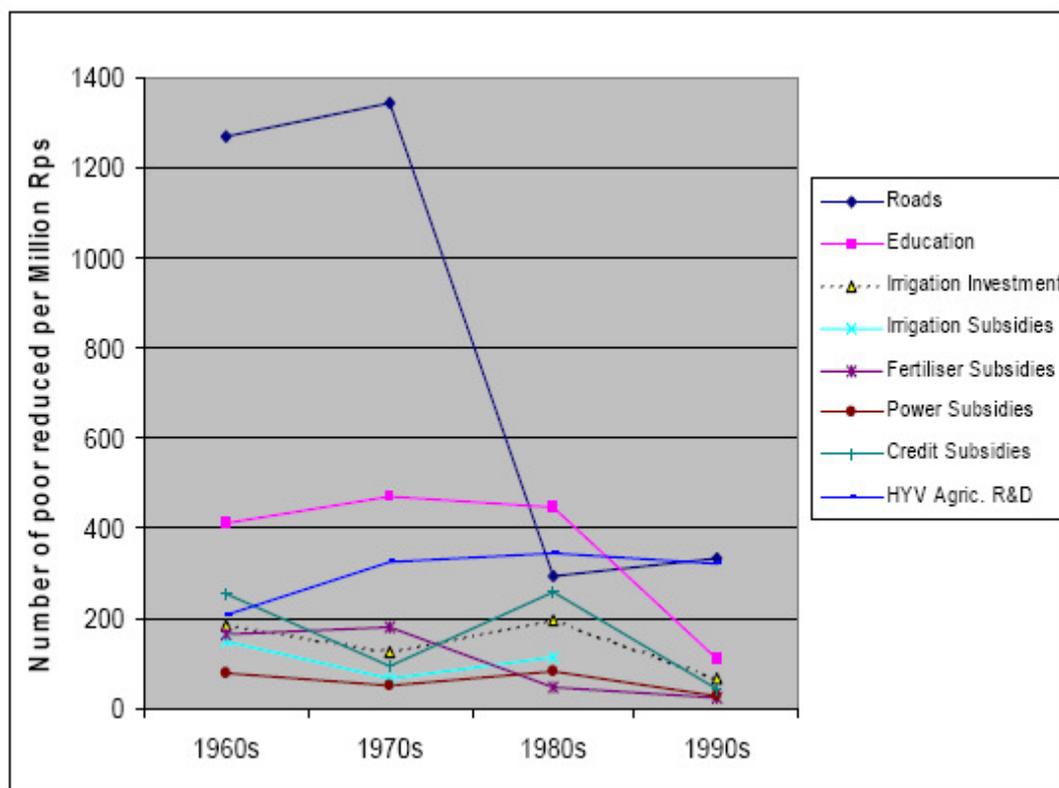
Source: Dorward et al, 2004: 615

The model depicting public-private policy interventions should change over-time and differ spatially (Dorward, 2004: 3). The first phase, referable to areas weakly integrated to markets and low developed, requires state intervention to invest in basic infrastructure, such as roads and irrigation. This is a necessary precondition to make further state policy interventions to ‘kick-start’ the markets work. Such policy interventions characteristic of the second phase would then allow a larger number of farmers to get access to reliable and on-time credit and input markets and efficient and profitable output marketing systems at low cost and low risk. Input subsidies (see section 2.4.3), when properly targeted, are one example of ‘smart’ policies to support the markets’ kick-starting phase. Once surplus production and large volumes of finance and input demand have been created, “the government should then withdraw from these market activities and let the private sector take over” (Dorward et al., 2004: 615).

Managing these interventions efficiently and effectively, trying not to be subject of political pressure, and understanding the right time of withdrawal, are difficult tasks the government has to deal with. Market intervention policies which happen too early, or are continued or too long might produce deadweight losses (Dorward et al., 2003: 82); in fact, benefits appear mostly in the early years and worsen over time once the intervention has served the primary purpose (Diao et al., 2006: 23), making the overall public intervention, if continued, result in

a failure. Since the benefits of such interventions in financial, input and output markets happen to appear in “critical but relatively short” (ibid) periods of agricultural transformation, they have been easily overlooked by analysts (ibid). This is why current policy guidelines support liberalisation processes, which attempt to skip government’s market intervention and shift directly from the first to the last stage of development (ibid). The arguments discussed within this process of agricultural transformation have been subject to limited attention, and few empirical studies have been carried out to support the hypothesis regarding the above mentioned policy-phases. A study supporting those hypothesis has been developed by Fann, Thorat and Rao (2003), and shows the payoffs from public spending in India in the period between 1960 and 2000 in terms of agricultural growth and poverty reduction. As observed in the figure 2.1d, roads and agricultural extension result to be the most profitable public investments in terms of poverty reduction and agricultural growth. However, policies such as credit and fertiliser subsidies, questioned by liberalist thinkers, might not have a negative impact on poverty reduction, but rather a positive one at the initial phases of economic development.

**Figure 2.1d: Changing Poverty Reduction Impacts of Government spending in India**



Source: Fann, Thorat and Rao, 2003

The present study attempts to provide additional arguments supporting the hypothesis argued by Dorward (2004) through empirical evidence from the field (see chapter 5 and 6).

Arguments in favour of 'unconventional' policy interventions are subject of discussion in this paper, and they will be later discussed more in detail (see chapter 6).

## ***2.2 Glimpses on Indian agriculture and the present agricultural policy of Karnataka***

### *2.2.1 Centralisation during the post-independence era: the Green Revolution*

Indian agriculture after independence was relatively weak, with stagnating or declining levels of grain production, low developments in basic infrastructure and irrigation facilities, a scarce institutional framework for the supply of credit and inputs to farmers and unreliable output markets (Rao, 2005: 13). Growth in production was difficult to achieve in such a constrained environment and without some sort of intervention from the state. This is the time when the government of India started with the design of medium term plans aimed at the regeneration of agricultural productivity. The first five years plan (1951-1956) invested massive resources in basic infrastructure and irrigation, paid attention to land reforms, and started with the creation of institutions for the supply of credit and inputs (ibid). Larger areas of uncultivated land were put under cultivation and productivity started to increase. However, it soon became clear that further increased investments in infrastructure and new technology were needed to spur agricultural growth. The overall goal of the policy interventions started in the late 60s until the end of the 70s was to pull up agriculture to achieve self-sufficiency in food grain production (Jha, 2001: 2). During this period, launched with the 4<sup>th</sup> five years plan in 1969 and widely known as Green Revolution, major changes were adopted in still traditional systems. The introduction of high yielding varieties (HYVs) of seeds, great intensification in the use of fertilisers and increased investments in irrigation and rural infrastructure have been the major changes brought by the Green Revolution.

These measures resulted in remarkable increases in output levels, and self-sufficiency in food grains was achieved in a period of less than two decades (Rao, 2001: 14). However, poverty levels in this period remained high; some of the critics state that revolutionary changes in agriculture focused prevalently on the most developed regions, leaving behind other areas less fortunate in infrastructure and natural resources. For instance, in India, states like Punjab achieved strong increases in productivity following the introduction of HYVs – with an adoption rate of the HYVs from 56 percent in 1970 to more than 90 percent by mid 80s. On the other hand, at the same time, poorer states such as Bihar and Orissa were still conserving

traditional varieties in the majority of the cultivated areas (Fan, Hazell and Thorat, 1999: 15). Same disparities regarded irrigation investments. Again, rich states such as Haryana and Punjab benefited from high percentages of irrigation of the cropped area, namely 80 percent for the first and more than 90 percent for the latter (ibid), whereas other poorer states such as Orissa and Maharashtra still face scarcities in irrigation facilities (which hinders even more the adoption of HYVs, being this positively correlated to irrigation). All this resulted in increased inequalities and levels of poverty among different classes of farmers and more and less developed regions, especially between irrigated and rain-fed areas (De Janvri and Sabbarao, 1986: 5). However, it is in those less developed regions that investments would be more profitable and could bring wider margins of poverty reduction.

Therefore, the major feature of the Green Revolution is the massive government intervention in agricultural production. The state was responsible for the majority of the investments in rural infrastructure and provided most of the key agricultural services, such as supply of improved seeds and fertilisers, credit, agricultural research and extension and storage and marketing facilities. The government intervened also in the stabilisation of market prices, e.g. minimum support price policies (see section 2.5.2), and subsidised many inputs to incentivise their uptake. This was intended to favour an increase in production also for small farmers (Diao et al., 2006: 23).

However, the initial benefits caused by public intervention were soon reduced and out-scaled by government failures and inefficiencies in spending. The negative effects of inappropriate state measures reached their peak after the beginning of the 90s, as a consequence of the SAPs promoted by the Bretton Wood institutions<sup>10</sup>. The new policy framework supported a reduced role for the state in the processes that lead to economic development. As mentioned before, the idea was that the functions once performed by the state should have been taken over by the private sector. Nevertheless, market failures and lack of institutions to control and coordinate the market prevented the private sector to step in, resulting in a vacuum in services and functions once performed by the state (Dorward, 2004). The new scenario called for the need of institutional reforms to correct government and market failures and to fill the gap left in those years for an improved provision of services. In India, one of the major governance reforms introduced from the beginning of the 90s is decentralisation.

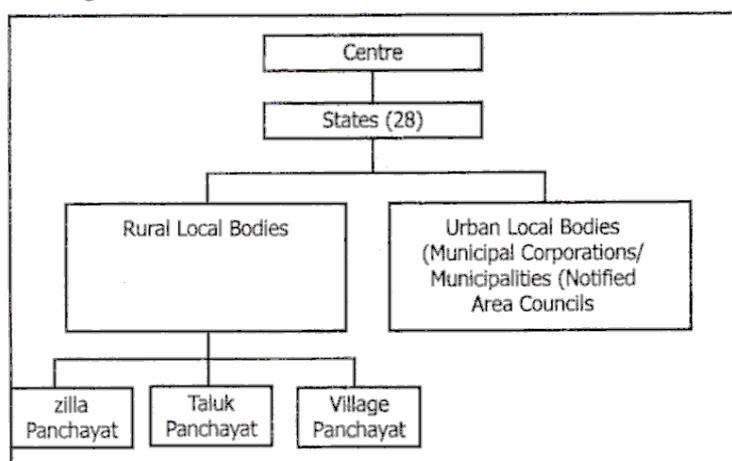
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<sup>10</sup> Bretton Woods Institutions: World Bank (WB) and International Monetary Fund (IMF).

## 2.2.2 Need for institutional reforms: effects of decentralisation on the provision of services

With the new constitutional reforms introduced by the government of India in 1993, the attempt was that of bringing the government closer to rural people, their needs and preferences. The 73<sup>rd</sup> amendment of the constitution formally recognised a three-tier level of local governance, called Panchayat Raj institutions, which took over some of the government responsibilities that were once performed by the central government. Figure 2.2.2 shows the present Indian multi-tier government structure.

**Figure 2.2.2 Indian decentralised government structure**



Source: Rao M G. (2001)

Panchayat Raj institutions - Zilla Panchayat (ZP) at the district level, Taluk Panchayat (TP) at the block level, and Gram Panchayat (GP) at the village level - started to perform political, administrative and fiscal functions in each state. The 11<sup>th</sup> schedule provides a list with the different sectors which have been decentralised to the GP, the village level<sup>11</sup>. One of the

<sup>11</sup> 29 sectors under Gram Panchayat. The Eleventh schedule added to the constitution of India by the 73<sup>rd</sup> amendment, includes a comprehensive range of development activities which should be devolved to the PRIs system as part of the decentralisation programme. Among others, PRIs are responsible of the following areas:

- i) Programmes for productive activities, including for instance agriculture, irrigation, animal husbandry and fisheries
- ii) Land development programmes, such as land reforms, soil conservation and minor irrigation
- iii) Education and cultural activities
- iv) Social welfare, covering women and child development programmes, family welfare and care of physically challenged people
- v) Provision of basic infrastructure such as drinking water, rural electrification, rural roads and bridges, and rural housing.
- vi) Poverty alleviation programmes, with a particular focus on the most vulnerable segments of the society such as SC/ST people.

(Source: <http://www.fao.org/DOCREP/006/AD346E/ad346e03.htm#bm03.2>)

reasons that led to the decentralisation of many functions originally performed by administrative bureaucracies at the central government was the recognition of inefficiencies in allocating resources. As in many other developing countries which embarked on a process of decentralisation (see World Bank 2003 for further details), the attempt was to improve the efficiency of public spending for a better provision of services, through increased government accountability and more participation of the local community in the political process. However, this has not been the case everywhere, and there are many examples discussed in the literature on the topic which show actually relatively weak correlation between decentralisation efforts and changes in people's lives in rural areas, in Indian states as in other developing countries (e.g. World Bank, 2000a; Blair, 2000; Crook and Manor, 1998; Crook and Sverrisson, 2001).

In short, the 73<sup>rd</sup> amendment contains the following main provisions:

**Box 1: 73<sup>rd</sup> amendment - main provisions**

- Establishment of local governance tiers, at the district, block and village level, known as Panchayat Raj Institutions.
- Direct elections at all levels of the three-tier PRI structure every five years.
- Reservation of seats: one-third reserved to women and SC/ST. Reservations proportional to their populations.
- Gram Sabha (village assembly) recognised as a deliberative institution at the village level.

*Source: Johnson, 2003: 17 (adapted)*

Decentralisation efforts should benefit the livelihood of local communities, for instance increasing allocative efficiency and facilitating the process of linking the supply of public services with people's real needs. This is actually true in theory but not always in reality (Sekher et al., 2007: 15). Empirical studies in the Indian case have been showing both positive and negative experiences in using decentralisation as a mean for development. Major constraints in the unsuccessful outcomes of decentralisation rely on restrictive governance, normative and resource constraints (ibid), on lack of transparency and accountability and spread of corruption among local governance institutions, scarce participation and no increased capacity of the local community in demanding services. Some studies (Singh, 1994) show that PRIs institutions might serve primarily elite groups or groups of big farmers instead of benefiting rural masses.

The state of Karnataka has a long experience in decentralisation and presents an advanced form at the fiscal, administrative and political level. There is an ample literature on the topic, covering "dynamics of local governance in Karnataka" (e.g. Ananthpur, 2006) from a socio-economic perspective, and specific literature on the role that decentralisation has on the

provision of public services (Aziz et al., 2002; Sivanna and Babu, 2004; Sivanna et al., 2002; Sethi, 2006; Alsop and Kurey, 2005). However, most of the literature in that regard has been focusing especially on the relationships between decentralisation and services such as drinking water supply, roads, transportation, education and health issues (e.g. Paul et al., 2005; Sekher, Bidhe, Islam and Das Gupta, 2006), and agricultural extension, but there has been little scope for the analysis of the relationship between decentralisation and market-related services. This is another area where the present study attempts to bring additional insights.

To sum up, the Green Revolution marked a shift from low to high productivity in agriculture, thanks to the increased adoption of new technologies and inputs (HYVs of seeds and fertilisers), and a boost in investments in rural infrastructure and irrigation development. This resulted in self-sufficiency in food grains, lower prices and a rise in real wages in agriculture. However, benefits deriving from the Green Revolution soon started to be unsustainable and efforts have been made in finding new ways to improve people's livelihoods, raise public investments' efficiency and ensure better provision of services. Governance reforms such as decentralisation have been implemented in the country since the early 90s with the aim of bringing the government decision-making closer to the people. However, the experience showed that decentralisation cannot be conceived as a panacea and there is no 'one size fits all solution' to be applied as a development strategy.

### *2.2.3 The role of agricultural cooperative societies in rural service delivery*

Cooperatives are other powerful instruments expected to empower local communities and lead them out of poverty. From past experiences around the world cooperatives seem to play a major role in rural service provision. They can be found in several forms, from credit and housing cooperatives to consumer cooperatives. But it is with *agricultural cooperatives* that such organised self-help organisations have showed most success in both the developed world, in countries such as the USA, Japan, France and Germany and in the developing world, in countries such as most of the African coffee producers (e.g. Kenya), in Bangladesh and India. Agricultural cooperatives assume a major role in the supply of some essential services in the rural sector such as the supply of credit and inputs, marketing and processing facilities. In being part of the cooperative, members can be assured that inputs are controlled in quality and price, access to credit is provided at affordable terms and output prices are not too low, and not largely curtailed from the middleman commissions. Producers' cooperatives have the

potential to create self-managed price-systems in incomplete markets (Hanisch, 2006) and can be then an instrument to link farmers to markets. In this way, agricultural cooperatives take over functions that are traditionally performed by private actors, and on which the private sector often preserve a market monopoly, imposing high prices for inputs, low prices for outputs and high interest rates for agricultural loans (Birchall, 2003).

Cooperatives create some economic advantages in the agricultural sector, and enable farmers to gain benefits from the market exchanges. Particularly, they can generate economies of scale and reduce transaction costs, and increase the incomes through growth in output volumes. They can raise efficiency through greater access to information and help farmers to gain new skills to improve the quality of their products. Finally, they can get access to more sources of credit and increase farmers' bargaining power through collective action (OCDC, 2007). The action of agricultural cooperatives is facilitated by the fact that they are generally extensively spread in rural communities and thus can have the chance to reach even the most remote farmers.

India has remarkable examples of cooperative successes. The first among others is the milk dairy cooperative which covers a huge network of farmers throughout the country, including many female members. There are roughly 100.000 dairy cooperatives in the country, with 12 million members providing 16,5 million litres of milk, equal to 22 percent of the total Indian milk production (OCDC, 2007).

The role of producers' organisations might play a crucial role in strengthening the linkage of farmers to rural markets and in improving the quality of services received in the market place. Facilitating the action of sound grassroots institutional arrangements is then expected to be an effective tool to favour agricultural growth in an equitable and community-driven manner.

#### *2.2.4 Karnataka's agriculture and state's priorities in the sector: focus on market-related services*

According to recent state figures (Government of Karnataka, 2006: 9), 66 percent of the population in Karnataka lives in rural areas and relies on agricultural activities as main sources of livelihood. The cultivable area accounts for 64,6 percent (12.370.000 hectares out of 19.050.000 geographical area), with average size of the holdings equal to 1,74 hectares; small and marginal farmers are the majority of land owners, accounting for 72,9 percent of

the total cultivable holdings (ibid) with an average holding of less than one hectare of land. Within the cultivable land, only 22 percent is under irrigation, making Karnataka one of the Indian states with the lowest percentage of land under irrigation; large areas of cultivated land under agricultural crops are in semi-arid regions and are subject to numerous agro-climatic constraints (ibid: 11)<sup>12</sup>. The agricultural productivity of most of the crops (rice, sugarcane and maize are exceptions) is below the national average and has an ample potential to improve its profitability (Official Group of the Government of Karnataka, 2007: 5). Beside crop production, other agricultural related activities are livestock production and dairy farming. Moreover, there is a relatively large market for sericulture, which has the potential to be expanded. In addition to high transaction costs to get access to markets, marketing systems are still not ensuring stable and profitable prices (ibid).

Recommendations contained in a recent report of the Official Group of the Government of Karnataka aim at the formulation of strategies to raise small-farmers' incomes while minimising their production risks and costs (Official Group of the Government of Karnataka, 2007: 4). With 4 percent of growth in the sector as a target, and small and marginal farmers who are expected to be the main actors of such growth, special attention has been given to improve their access to credit, input and output markets. In fact, besides strengthening rural infrastructure, it is perceived that credit, inputs and technology and output prices are crucial factors determining farmers' production performance.

As far as credit is concerned, the major attempt will be of providing regular and easy access to credit, which is still one of the major causes of farmers' distress (see section 2.4). In Karnataka, 20 percent of the loans provided to farmers for agricultural purposes are still coming from private lenders (Official Group of the Government of Karnataka, 2007: 15), such as big land-owners. Getting access to credit through formal financial institutions (FFIs) such as Rural Commercial Banks (RCBs) and Primary Agriculture Cooperative Societies (PACs) is perceived as a time and money-demanding task (especially because of the differences in procedures among various FFIs), which only better-off farmers are willing to take over. Efforts are then going in the direction of simplifying and universalising this process (e.g. standardising interest rates and providing each farmer with a passbook with all his credit history). Expanding the cooperative bank sector, prevalent source of credit among small-farmers, is also seen as one of the main priorities (Government of Karnataka, 2006: 64). In terms of inputs, major emphasis is given in providing good quality seeds, by increasing the

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<sup>12</sup> Karnataka is second to Rajasthan (a semi-desertic region in North India) in terms of arid-land coverage, characteristic that primarily stresses the northern parts of the state. Droughts are also a major risk which is undermining Karnataka's agricultural production; from 2001-2002 to 2003-2004 Karnataka's agriculture received a major shock in production due to the persistence of droughts.

number of input providers and the number of controls over their quality. Finally, the state of Karnataka is going to guarantee stable and remunerative output prices through support price mechanisms based on production costs criteria (see section 2.6.4).

## ***2.3 The role of infrastructure and market-related services for the uptake of small farmers' agricultural production***

### *2.3.1 The role of infrastructure as a prerequisite for rural development*

In the past decades, governments have made investments in rural infrastructure to establish the basic requirements for achieving agricultural growth. Investments in roads and irrigation have been found to have the major positive effects on agricultural productivity and are fundamental conditions for agricultural growth. Without those preconditions, the success of further policies leading to agricultural transformation is undermined. This line of thinking is in accordance with the original assumption that there is a particular pace of development which affords different services at different levels of development. The level of development of a region can then be judged according to the access and quality of services provided.

As showed in figure 2.1d, government spending on roads has been found to have the largest impact on poverty reduction as well as a remarkable effect on productivity growth, particularly in the early phase of development (Fann, Hazell and Thorat, 1999: X). Still in the same study conducted by Fann, Hazell and Thorat, it emerges that irrigation investments had the third largest impact on agricultural productivity but just a small impact on poverty reduction (ibid). The government of India has made huge investments in irrigation systems, and as result the percentage of cropped area increased from 23 percent in 1970 to 33 percent in 1988 (Fan, Hazell and Thorat, 1999: 15). Still, there are major discrepancies among regions in terms of irrigation facilities; some areas benefit from major irrigation systems, characterised by the supply of canal irrigation water, while others have just access to minor irrigation systems, where water is collected from the ground<sup>13</sup>. Taken as an asset, water supply is the facilitating factor for all the other inputs such as fertilisers and HYVs seeds (Raju and Gulati, 2002).

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<sup>13</sup> The two irrigation systems lead to very different productivity levels, being the canal irrigation much more effective to increase yields. The traditional bore-well system has also the drawback of deteriorating soil quality, extracting important minerals from the ground.

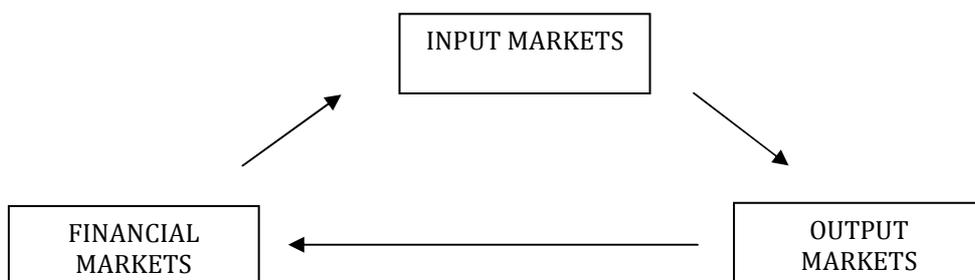
Considering potential relationships and synergies among services, electrification has a positive effect on the functioning of irrigation facilities. In areas where canal irrigation is not available, the provision of electricity is essential for the withdrawal of ground floor water through pump set facilities. This makes those two services and their performance strictly correlated to each other. Other positive correlations exist also between better roads and transportation systems and improved physical access of farmers to markets, and higher levels of education that are supposed to strengthen social capital and expand agricultural knowledge (World Bank, 2001).

In short, investments in infrastructure with particular attention to rural roads and communications are crucial to link small-farmers to agricultural markets and favour regional market integration<sup>14</sup>, and are a ‘*conditio sine qua non*’ to succeed in the path of pro-poor agricultural growth (World Bank, 2008: 232).

### 2.3.2 Effective market-related services foster agricultural productivity

One of the most urgent problems in rural areas of developing countries is related to their difficulty to raise their agricultural productivity. Most of the small-farmers sell only a marginal share of the production in the market, because of low productivity levels and low diversification of crops cultivated; most of the times the production is hardly sufficient for subsistence purposes. In order to spur farmers’ potentialities and stimulate productivity growth, the delivery of services in financial, input and output markets plays a key role (Dorward, 2004). Those services are complementary to each other. Improvements in the effectiveness and quality of services provided in one market affect the service performance in the others (see figure 2.3.2).

**Figure 2.3.2: Synergies among market-related services**



Source: own design

<sup>14</sup> Zhang, minister..., affirmed that in China “rural roads are one of the most important local public goods because they connect farmers to the market and allow them to switch from subsistence to commercial agriculture” (IFPRI, 2007: 10).

Higher access to credit facilities can facilitate the acquisition and usage of improved inputs, such as HYVs seeds, fertilisers and pesticides. Higher amounts and better quality of inputs increase productivity and generate larger output quantities; farmers traditionally cultivating subsistence crops can start to sell surpluses into the market and those who do already market their production can increase their marketable share. Higher production levels sold in the market decrease transaction costs per unit and make the whole transaction more affordable and profitable. Finally, when higher revenues are generated and farmers can benefit from increased cash liquidity at their disposal, the 'productive' cycle starts again and agricultural productivity is fostered. Crucial for a successful outcome of these interrelationships is a sound service delivery in all the three stages, that means:

- i) Easy and regular access to credit facilities.
- ii) Affordable and on-time access to good quality inputs.
- iii) Reliable marketing systems with stable and reasonable prices which can enable farmers to make-up some profits on the production costs undertaken.

## ***2.4 Rural financial markets***

### *2.4.1 Major issues in agricultural credit delivery*

Rural financial markets of developing countries are faced by many constraints which make the delivery of financial services very difficult. Geographical inaccessibility is one of the major causes for which people in rural areas are not reached by financial services. High transaction costs and risks are involved in providing financial services to rural borrowers. Traditionally, commercial banks are not attracted by transactions with individual small borrowers; it has been estimated that the costs for a 100 \$ loan are the same as for a 2000 \$ loan (IFAD, 2007). Lack of collaterals, given by poor living conditions and scarcity of cash liquidity is another major problem. Without collaterals, banks have generally distrusted to concede credits, fearing high default rates (non repayment of the loan) and high delinquency rates (late repayments). As a consequence of the low spread of formal channels for credit delivery, rural economies suffer from a strong dependency on the informal sector, which appears for many poor people the easiest feasible solution to escape problems of low cash liquidity and seasonality of incomes (Lee, 2006). In fact, moneylenders can provide frequent cash flows without asking for collaterals or requiring heavy paper work, charging on the other hand

higher interest rates than those offered on the market. Table 2.4.1 summarises the different types of formal and informal institutions present in traditional rural financial markets.

**Table 2.4.1 Types of rural lending institutions**

<b>TYPE OF LOAN</b>	<b>INFORMAL INSTITUTIONS</b>	<b>FORMAL INSTITUTIONS</b>
<b>Secured</b>	Pawnbrokers	Commercial Banks
	Moneylenders who take possession of land titles	Rural Development Banks
	Labour-paying institutions	Government Credit Programs
<b>Unsecured</b>	Moneylenders	Credit cooperatives
	Credit from traders (purchasers of outputs)	Farmers' associations
	Credit from traders (sellers of inputs)	Microcredit groups (SHGs)
	Friends and family	Non Bank Financial Institutions (e.g. insurance companies..)

*Source: Austin and Sugihara, 1993 in World Bank, 2002 (adapted)*

In order to expand access to credit facilities of small and marginal farmers, major efforts have been undertaken by governments in developing countries. The generalised consensus between the 50s and 70s on the fact that poor people in rural areas were cash-deficient, generally not having savings-practices, and very risky borrowers, led financial providers to deliver loans to farmers only on a subsidised base<sup>15</sup>. The subsidy approach soon resulted in a failure: repayments rates were very low, because poor people felt the credit as a gift and they were not motivated in repaying back the loan amount. As a consequence, governmental and non-governmental financial agencies left the majority of small farmers, their target group, without any form of credit programme, while often serving the medium and large enterprises (Kropp, Marx et al, 1989: 1). After the failure of the subsidised lending of the 50s-70s, dissatisfaction and a deteriorated financial situation at the national and international level induced governments and donor institutions to modify the development policies, and reformulate a way to successfully mobilise local financial resources in rural areas; this is the time when the current idea of micro-credit and self-help solutions gained ground (Remenyi and Quiñones, 2000). Some of the major issues that Micro-Finance Institutions (MFIs) had to face were:

- i) To fix reasonable interest rates that could make the repayment of the loan affordable by small lenders, at the same enabling financial sustainability for the MFIs survival.

<sup>15</sup> Subsidised base means that farmers receive loans at very low interest rates.

- ii) To ensure a wider outreach in areas where farmers are most in need.
- iii) Design alternative strategies to ensure high repayment rates (e.g. through group lending).

#### *2.4.2 Rural financial markets in India*

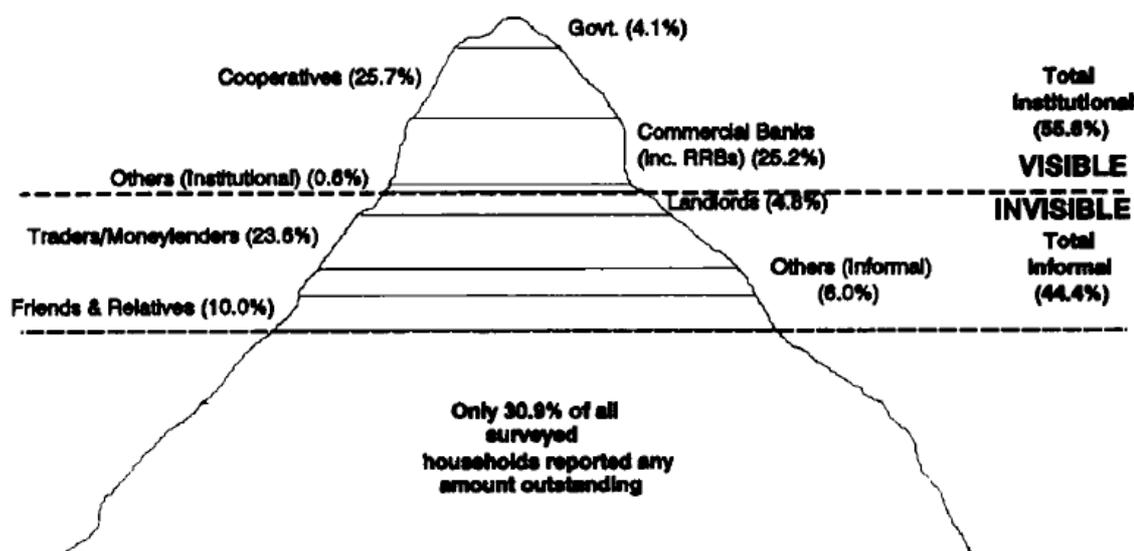
The GoI made substantial efforts to expand banking facilities in rural areas; the first sign which determined the need for state intervention was given with the All India Rural Credit Survey. According to its findings credit from formal institutions accounted only 7 percent of the borrowings of rural households in 1951-52 (Mahajhan and Ramola, 1996: 211). In the following years, commercial banks embarked on rural finance programmes, and a network of regional rural banks (RRBs) has been established in 1975. Moreover, numerous national credit cum subsidy programmes started, such as the Integrated Rural Development Programme (IRDP). The NABARD (National Bank for Agriculture and Rural Development), functioning as an apex bank for rural credit and established in the 1982 by the Rural Bank of India (RBI), played a crucial role in the promotion of SHG-based microfinance programmes (Remenyi, 2000: 88). A pilot project was launched by NABARD at the beginning of the 90s for linking SHGs with banks, which was then promoted throughout the country. As shown later, NABARD plays also a central coordination role within the Indian three-tier agricultural credit cooperative system (see section 2.4.3). The performance of Rural Finance Institutions (RFIs) in the past 50 years<sup>16</sup>, including Commercial Banks (CBs), Regional Rural Banks (RRBs) and Co-operatives Banks, demonstrates how far the GoI has gone in the attempt to improve the access to credit facilities in rural areas (Basix and Ramola, 1996: 212).

However, although the major attempts undertaken to improve the delivery performance in the formal finance sector, large strata of the Indian rural society remain still dependent on informal lending. As figure is showing (see figure 2.4.2), at the beginning of the 80s only 30.9 percent ca. of the interviewees samples reported to have any outstanding loan, and out of this 30 percent the 44.4 percent still borrowed money from informal lenders.

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<sup>16</sup> Including liberalisation programmes launched in 1991, which concentrated especially on financial sector reforms (Mahajhan and Ramola, 1996: 212).

Figure 2.4.2: The Rural Financial Iceberg (situation during 1981-1982)



Source: RBI (1989), in Mahajan and Ramola (1996): 213

According to the same figures (All India Debt and Investment Survey), in 1951 the share of rural credit with informal finance institutions was of 93 percent (NABARD<sup>17</sup>). Again, the same survey conducted in 1991 has shown that this percentage has decreased to 34 percent. However, in 2003 a National Sample Survey has estimated (ibid) that still 48.6 percent of the rural households did not have loans outstanding, neither in the formal nor in the informal sector.

To sum up, these are the major problems faced by rural borrowers:

- i) Scarce credit availability. Although the relatively extended formal credit network, rural people face difficulties in getting credit from FFIs due to lack of collaterals and high transaction risks and costs<sup>18</sup>.
- ii) Lack of access to on-time credit. Especially during particular agricultural seasons (such as the seeding one), small farmers find themselves in cash-deficiency situations. Available cash liquidity at the right time results then to be essential to buy inputs required in the production process. As it will be argued later in the case study analysis (see section 5.3.2), this is still one of the major constraints small farmers have to deal with.
- iii) High interest rates.

<sup>17</sup> Source: <http://www.nabard.org/departments/pdf/pub/BROCHURE%20pg%201.pdf>

<sup>18</sup> Transaction costs incurred in the borrowing process are high; for instance, in the study carried out by Basix and Ramola (1996), transaction costs of borrowing have been estimated to be in the range between 17 and 22 percent of the loan amount for CBs loans.

Community-based institutional arrangements, namely cooperatives and Self-Help Groups (SHGs), have played a major role in favouring the access to credit to poor people in rural areas of India. The following two sections will deal with the issue.

#### *2.4.3 The cooperative banking system and agricultural credit provision*

Reforming the cooperative structure was one of the first priorities during the Indian post-independence period. The state was supposed to partner the cooperatives (Sriram, 2005: 1699). Cooperatives were expected to facilitate the private capital formation in agriculture and respond to small and medium farmers' credit needs. In India, the cooperative system is related to the provision of agricultural loans, through the delivery of both short and long term credit. For the short-term credit cooperatives have a three-tier structure, which includes an extensive network of branches at the village level, the Primary Agriculture Cooperative Societies (PACS), federated into a District Central Cooperative Bank (DCCB). All the DCCBs are federated in State Cooperative Banks (SCBs). NABARD plays a facilitating and coordinating role. It is responsible for the refinancing of the agricultural cooperative credit<sup>19</sup>. Besides providing agricultural loans to small farmers, together with other formal financial institutions such as CBs and RRBs, cooperatives are also part of the SHG-Banks linkage programme. In 2005, it has been estimated that cooperatives provided the 9,3 percent of the overall flow of credit under this initiative (Sriram, 1999: 82).

In recent years, there has been a decrease in resources channelled from NABARD to the cooperative sector. Cooperatives, especially at the state and district level, have been found to be failing in guaranteeing successful rates of repayment (Sriram, 2005: 1700), and proved to be characterised by a lack of "stability"<sup>20</sup> and "efficiency"<sup>21</sup> (RBI, 2003 in Sriram 1999), with no remarkable improvements in the period of time between 1997-98 and 2001-02. Moreover,

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<sup>19</sup> NABARD provides funds to cooperatives at concessional rates ranging between 5.25 percent and 5.75 percent per annum.

<sup>20</sup> Stability indicators:

- i) Share of capital to asset ratio
- ii) Own funds to asset ratio
- iii) Non-performing assets as percentage of total outstanding loans

(Sriram, 1999: 84)

<sup>21</sup> Efficiency indicators:

- i) Interest spread
- ii) Operating expenses
- iii) Profitability

(ibid)

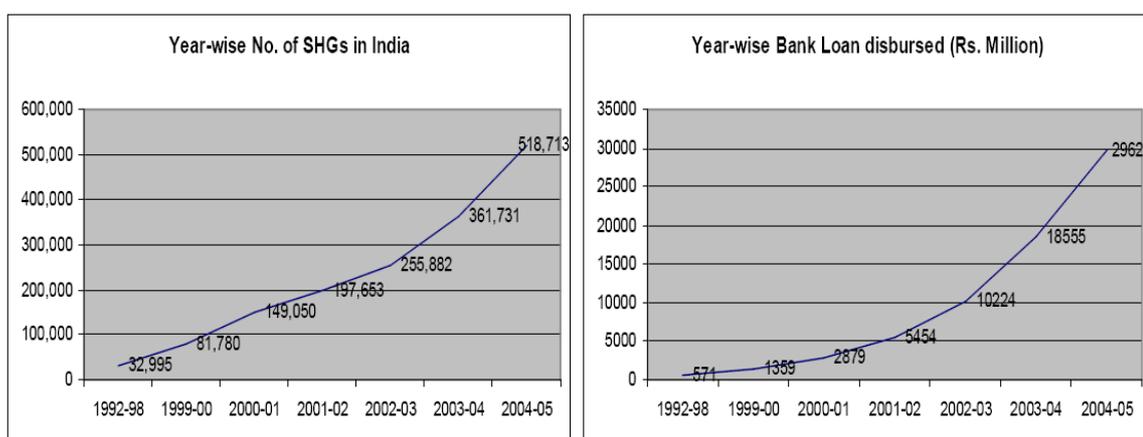
also their share in the overall rural credit flow (long and short term) sharply declined from 61.8 percent in 1992-93 to 38.4 in 2004-05 (Sriram, 1999: 84).

Due to their focus on the rural sector and the extensive network, cooperatives remain ideal agencies to issue crop loans. Therefore, cooperative credit should be increased and facilitated to make credit affordable also to the smallest and most marginalised farmers (Bhaskaran, Muralidaran and Roy, 2004: 2). State agencies, such as NABARD should provide more funds to expand the lending possibilities of cooperatives (ibid p.3). Before doing that, the efforts should be devolved to solve internal problems undermining their quality and effectiveness.

#### 2.4.4 SHGs: a bottom-up approach to reach the most vulnerable

Beside cooperatives, another form of grassroots credit provision refers to SHG-lending. Nowadays, microfinance programmes using SHGs as financial intermediaries are increasingly becoming the main tool for spreading access to credit among the poor in India (see figure 2.4.4). The SHG-bank linkage programme launched by NABARD is an example of how SHGs might be exceptional tools to reach the poorest segments of the populations even in most remote areas. The targets of this system of community-based lending are mostly rural poor women that lack access to any form of credit facility.

**Figure 2.4.4: The spread of Self-Help Groups in India**



Source data for the tables: Patel (2006)

Major benefits have been observed by using SHGs as an instrument for credit delivery. Particularly, they favour reduction of transaction costs and improved rates of repayment, thanks to the provision of the so-called 'social collateral' and to the closeness to their members (Helms, 2006: 36). Moreover, the experience has shown that working through SHGs facilitates "the generation of internal resources through the mobilisation of savings"

(Remenyi, 2000) and might contribute to reach sustainability due to the high participation in the decision making (Fernando, 2006).

The reduction of transaction costs is one of the main factors which makes the working through groups so appealing. The high costs involved in lending to a large number of small farmers with a multitude of repayment transactions and expected low returns was one of the major challenges of the microfinance institutions and what prevented formal commercial banking organisations from covering rural areas with financial services (Jain and Moore, 2003: 11). Through group-lending, administrative costs for the lender are reduced and costs for monitoring are shifted to the SHG (Helms, 2006: 36). The group becomes responsible for supervising the loan repayment performances of the borrowers; thanks to the closeness, deep knowledge and information on its members, the SHG is in a far better condition to carry out the monitoring task. Group self-selection and joint group liability serve as social collateral; they facilitate the monitoring of the repayment performance and reduce the tendency of delinquency and default through “social sanction and peer enforcement” (Fernando, 2006: 99). Another important benefit brought by working through self-help groups is the wider outreach of target groups also in the most remote areas. The closeness of the SHGs to their members in each community, due to their local, endogenous and voluntary nature, is thus a powerful tool for a wider outreach of usually excluded people. Finally, the strong participatory nature of the SHGs empowers its member-borrowers and, in the long-run, can turn out to be an effective and sustainable instrument to enable mostly poor women in rural areas to get access to credit facilities.

The Grameen Bank of Bangladesh is a notorious example that apparently confirms group-lending as a successful approach to extend credit possibilities to the poor, improve their livelihood opportunities and alleviate poverty (Morduch, 1999: 229). Its founder, Muhammad Yunus, started in 1976 with the first micro-lending experiments in the village of Jobra, Bangladesh. Nowadays, it counts 7.56 million borrowers, whose 94 percent are women (Grameen Foundation<sup>22</sup>). Its model has been replicated throughout the developing world and lies at the basis of the so-called ‘microfinance revolution’. Although the bank is still not able to cover the full costs of subsidised lending (for which the bank relies mostly on external funds) with profits deriving from repayments (Morduch, 1999), it has achieved enormous results, translated in an exponential growth in the average loan portfolio (ibid: 239) and in members’ number.

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<sup>22</sup> More information on the Grameen Bank: <http://www.grameen-info.org/>

However, besides difficulties incurred by MFIs in reaching financial viability and become sustainable, the performance of microcredit experiments is challenged by the quality of the groups. Many SHG members come together just with the intention to get easy saving and credit facilities, without the right motivation to carry out groups activities. This undermines the soundness of the group and can have fatal consequences for the group destiny.

## ***2.5 Input markets***

### *2.5.1 Imperfections in input markets*

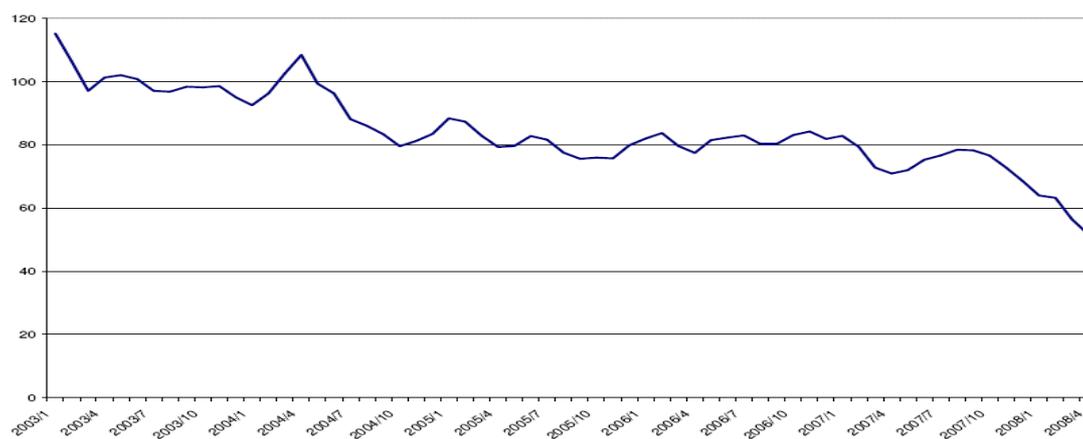
The provision of timely, good quality inputs<sup>23</sup> at low price has a major impact on small-farmers' agricultural growth. However, market inefficiencies often prevent farmers to get access to sufficient inputs for their production requirements. Major problems derive also from present high input prices<sup>24</sup> relative to low output prices that cause low profit margins for many small farmers. Production costs and output prices are not increasing at similar pace; in fact, the first are raising much faster than the latter ones and prevent real income growth for farmers (Rao, 2003: 72). A recent report from the FAO states that the price of fertilisers has recently grown up rapidly, exceeding price increases of agricultural commodities (FAO, 2008). As observed in figure 2.5.1a, there has been a trend in the past five years towards declining output to input price ratios.

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<sup>23</sup> Inputs include seeds, fertilisers, pesticides, agricultural tools, water pump sets in case of minor irrigation water supply systems.

<sup>24</sup> For instance, real world prices have declined throughout the past 30 years of 40 percent, while fertiliser price/grain ratio has remained relatively constant (Townsend, 1999: 98).

**Figure 2.5.1: Output to input price ratio: food vs inputs (base year: 2003)**



Note: Output and input price indices are un-weighted geometric means of the relative nominal prices of the individual commodity prices. The relative price of each commodity is the nominal price over the base period price.

Source: FAO 2008<sup>25</sup>

Scarce credit possibilities, high input prices and low output prices are all factors that determine low output levels and lack of incentives in agricultural investments. Moreover, such low productivity levels do not allow the generation of economies of scale, and this constrains an uptake in production quantities.

Input markets are also characterised by the presence of few actors in a monopsonist situation, with power to decide prices, regardless of the quality (which is often questionable). Another major problem faced by small farmers is getting on-time input availability. Especially when they are cash deficient, the likelihood that they will make use of productive inputs in an efficient way shrinks.

### *2.5.2 The role of subsidies and the infant-industry argument*

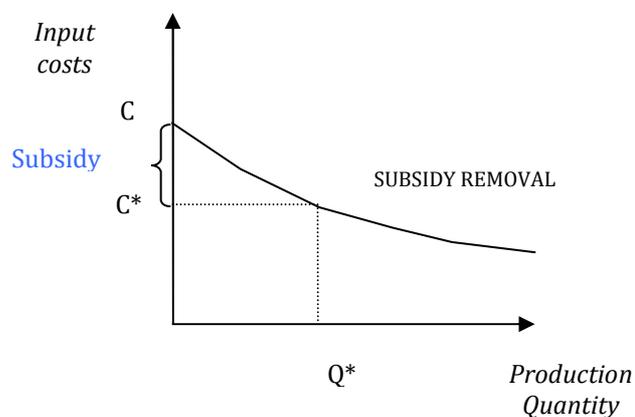
Subsidies to kick-start markets can find justification using the infant-industry argument. According to this argument, the government might introduce protectionist interventions in particular markets to enable those with a potential comparative advantage to grow (through accumulated sector knowledge which is gained with higher production levels). In case of scarcely developed input systems, market failures prevent farmers to achieve profitable output levels. Farmers cannot afford appropriate input quantities due to high prices and this keeps production levels low<sup>26</sup>. The introduction of subsidies would maintain input prices at lower levels than the price given on the market, allowing farmers to purchase right quantities

<sup>25</sup> In: [http://www.fao.org/fileadmin/user\\_upload/ISFP/Incentives.pdf](http://www.fao.org/fileadmin/user_upload/ISFP/Incentives.pdf)

<sup>26</sup> For most South-African countries, beside high prices, there is an additional problem of scarce input availability, due to high transportation costs.

of inputs. Subsidies should be maintained until the production levels generate economies of scale and a reduction of production costs per unit (World Bank, 2008); once achieved sufficient production volumes, the government should stop subsidising inputs.

**Figure 2.5.2: Subsidies to kick-start input and output markets**



$C^*$  = Costant input costs  
 $Q^*$  = Optimal production quantity at which the subsidy should be removed  
 $C_n$  = Initial input costs

*Source: adaptation of the infant-industry argument ( own design)*

The relevance of input subsidies as kick-starting policies to increase small farmers' productivity has been extensively promoted by several works of Dorward (2004b and 2003). As explained in figure 2.1c, subsidies might allow the generation of surplus production and of large volumes of credit and input demand. At that point, starting from  $Q^*$  in figure 2.5.2, a removal of subsidies is advisable to prevent harmful market distortions.

Subsidies can be seen as a second-best option to facilitate the acquisition of inputs and provide incentives for the adoption of new technologies (such as HYVs seeds and fertilisers); thus they are a protective mechanism against market failures and an initial instrument to improve farmers' performance. The state, supporting this form of policy intervention, fills the gap where the private sector has not stepped in the provision of services as expected by liberalist views (Dorward et al., 2004b: 613); exceptions are represented by cash crops, such as cotton (ibid 1998), where the private sector has found incentives to get into the market and to perform a coordination role. For food crops this did not happen. Here, government intervention is needed in the fist phases, to stimulate production levels that are still low and inefficient. This can be done through interlocking arrangements of subsidised input supply and credit subsidies, as well as through state intervention in output price stabilisation and guaranteed producer procurement (ibid 2004). In all cases, as mentioned before, one of the

most difficult tasks that the government has to perform is to understand the right time to withdraw its action and hand over the responsibility to well-functioning market forces.

Figure 2.1d for example shows how fertiliser subsidies have initially a high scope to reduce poverty. Thus, conclusions from studies carried on by Fan et al. (2004) reject the hypothesis supported by liberalisation theories affirming that, at least in the early stages of agricultural growth, fertiliser subsidies would be inefficient instruments for economic development.

Governments of many developing countries have raised the issue on how to increase affordable and timely input supply. In the case of Zambia, a household survey showed that only 29 percent of farmers acquired fertilisers, out of which 59 percent by private dealers. The case of another African country, namely Malawi, is well-known for the success of a programme designed to jump-start maize production for all smallholder farmers (Levy, Barahona and Chisinga, 2004). It started from the recognition that very few farmers could get access to reasonable quantities of inputs because of cash deficiencies (ibid). Starter-packs of new inputs begun then to be delivered to farmers in the main agricultural season<sup>27</sup>. In this way, both subsistence production for household's food security and marketed surplus started to increase. Data on the programme achievements show that the starter-packs raised maize production on average by 125-150 Kg per household.

The major drawback in using this form of market intervention derives from the high opportunity costs they have. In fact, the financial resources used for input subsidies could be efficiently diverted to investments in other public goods and social expenditures. Moreover, subsidies can be easily subject to political capture and create inequalities; since larger farms have a larger input requirements, benefits are more likely to go to larger farms (Rao, 1983; Singh and Chand 1986 in Rao 2003: 81). Also more productive regions, with better natural resources and infrastructure and major irrigation facilities, are likely to get larger benefits from subsidies; thus, subsidies might increase inequalities (see annexes). This has of course limited the resources available for small and marginal farmers (especially those in arid areas), whose production potentialities heavily depend on subsidised inputs. Better targeting, that means including only the poorest farmers, could enormously reduce the state's burden caused by subsidies in agriculture and favour pro-poor agricultural growth. It should be guaranteed that benefits deriving from subsidies are accrued to the most vulnerable and resource-deficient farmers. Decentralised governance systems might in this sense be

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<sup>27</sup> Starter-packs were containing 2,5 Kg of hybrid seeds and recommended type and quantity of fertilisers for 0,1 hectare of land. Nearly three million packs have been distributed in the period between 1999-2000. In the two following years the amount of packs was scaled down and increased efforts to target the most vulnerable farmers were made (Levy, Barahona and Chisinga, 2004).

beneficial in the process of accurate selection of small and marginalised farmers. There are good reasons to think that the targeting process could be benefited if undertaken by local governance institutions (Rao, 2003: 81), such as, in the Indian context, the local village assemblies (Gram Sabhas)<sup>28</sup>.

### *2.5.3 Subsidies in Karnataka*

In Karnataka, subsidies in food grains increased roughly five times from 1984 to 1999-2000 (Rao, 2003: 5). A similar trend was reported for subsidies on fertilisers and agricultural credit. There are several direct schemes in agriculture<sup>29</sup> supported by the government. Those schemes are generally sponsored by the central government through the state government. Karnataka also faces inequalities in input subsidies distribution. Larger, more productive and better endowed districts in terms of infrastructure and technology are getting larger shares of subsidies (Rao, 2003). Also, when distribution among classes is considered, it is normally the better-off and big-holder farmers who are the most benefited, accounting for more than 60 percent of the fertilisers use (Deshpande, Bhende and Raveendra Naika, 2003: 83).

## **2.6 Output markets**

### *2.6.1 Agricultural pricing policy in developing countries*

Experience from the past of developed and developing countries has shown that at early stages of economic development, when agriculture is the largest industry, large groups of farmers have been taxed and benefits from price policies have been mostly accruing to consumers. This is in accordance with the principle of optimal distribution strategy in the model of pure democracy, where maximum burdens are imposed on a large majority and maximum favours granted to a small minority (Bates, 1988; Bates and Rogerson, 1980). At higher levels of economic growth, taxation of agriculture decreases and subsidisation of agriculture increases; a small group of farmers gets benefits at the expenses of a large group of consumers, which bears the burden of farmers' subsidisation. This shortly explains why agriculture is being taxed in developing countries and subsidised in developed economies.

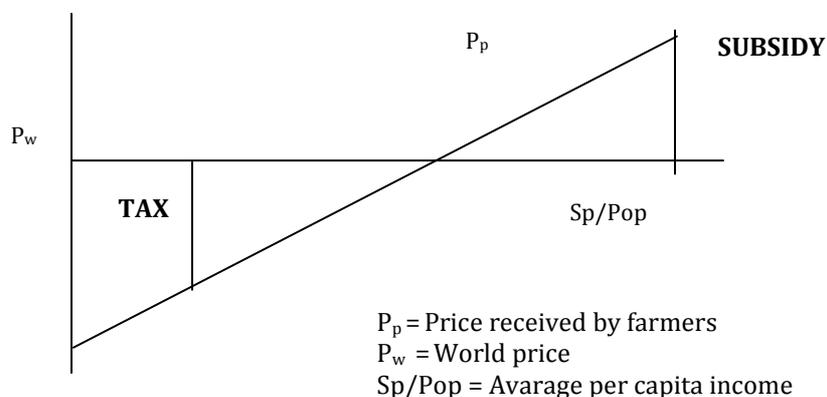
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<sup>28</sup> A decentralised system of input provision has additional advantages such as the reduction of the transportation costs and an easier storage process.

<sup>29</sup> Direct Subsidy Schemes in Agriculture (some of them): production and distribution of quality seeds, provision of bio-fertilisers, sustainable development of sugarcane based cropping system (provision of cultivation equipment and training) and intensive crop insurance scheme (Rao, 2003: 78).

Figure 2.6.1 shows how the agricultural price policy is changing during the course of economic development of a country.

**Figure 2.6.1: Agricultural price policy in the course of economic development**



Source: Hayami and Honma (1986)

As seen in the figure 2.6.1, prices received by farmers in cases of low economic development are lower than the expected world prices. Government attempt was to keep food prices low for the consumers, at the expenses of the large number of farmers. However, the resultant victims of those price policies were smaller and marginalised farmers and not the better-off ones.

Recently, the trend has moved in direction of producer protection, and measures have been applied by governments to stabilise domestic producer prices on world markets. However, output markets in developing countries remain constrained by low returns and high transaction risks and costs. Those risks and costs distort efficient market exchanges and prevent farmers from obtaining reasonable returns from their production.

### 2.6.2 Transaction risks and costs

*"There have always been gains from trade...but there have also been obstacles to realising those gains"*

North, 1989

What North is referring to are transaction costs and risks incurred in market transactions. Transaction costs generate from inefficiencies characterising market exchanges. Particularly,

the risk of errors of actors taking decisions, coordination problems, the presence of market uncertainties<sup>30</sup> and lack of complete information (Furubotn and Richter, 2005: 47).

Such costs of using the market can be classified in costs of obtaining and processing market information, e.g. to know the quality and prices of the goods (Hayack, 1945; Alchan and Demsetz, 1972), of searching for a trading partner<sup>31</sup> (ibid), costs of bargaining and decision-making during the course of a negotiation in terms of time and resources spent<sup>32</sup> (Coase, 1937; Williamson, 1985), costs of monitoring (Bardhan, 1989) and enforcing contracts (North,1989). Moreover, transaction costs can also be expressed as fixed, not dependent on the volume and frequency of the transaction, and variable, which are by contrast dependent on those two factors (Beckmann, 1997). Still according to this categorisation, there can be transaction costs that are ex-ante, prior to the negotiations, and ex-post, after the contract has been made (ibid); to such categorisation belong also the sunk costs, that are the costs of holding that capital fixed during the search process (Gabre-Madhin, 2001: IX).

The figure 2.6.2 shows gross and net production curves. In case of positive transaction costs, the net production curve lies always below the (gross) production function; it is derived by the gross production curve less the transaction costs. The net marginal productivity, which is represented by the slope of the net production curve, is always smaller at whatever quantity of input Z utilised (Furubotn and Richter, 2005). Such curve plays an important role in the decision-making of producers, since their optimising considerations are based on the net production curve. For instance, if a farmer is willing to sell OC units of the agricultural good, he has to produce more than OB units, since CB units available are going to cover the transaction costs (ibid: 68). Higher the transaction costs, bigger will be the difference among those two production functions, and more a farmer will have to produce to achieve the actual profits he wants to gain. Among factors that influence the volume of the transaction costs, the environment in which the transaction takes place assumes particular importance. This can refer to a specific (Beckmann, 1997) natural, technical, economic, social and political, and institutional environment. Investing in the institutional environment can significantly affect the reduction of transaction costs.

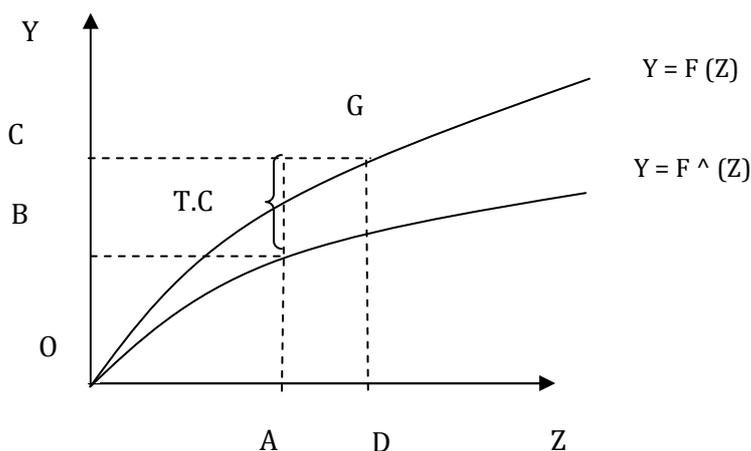
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<sup>30</sup> Market uncertainties: buyers and sellers do not know in advance who will be the corresponding partner and under what conditions the transaction will take place (Furebotn and Richter, 2005).

<sup>31</sup> Costs incurred in finding a trading partner in anonymous exchanges with unknown people can be relative high in rural and not integrated markets. This is why trust in relationships with known people can be an important factor to reduce those costs in the transaction (Furebotn and Richter, 2005).

<sup>32</sup> Bargaining and decision-making costs include also time and resources spent in balancing interests during a negotiation or reaching a decision within a group.

**Figure 2.6.2: The gross and net production curves**



Source: Furubotn and Richter, 2005: 69 (adapted)

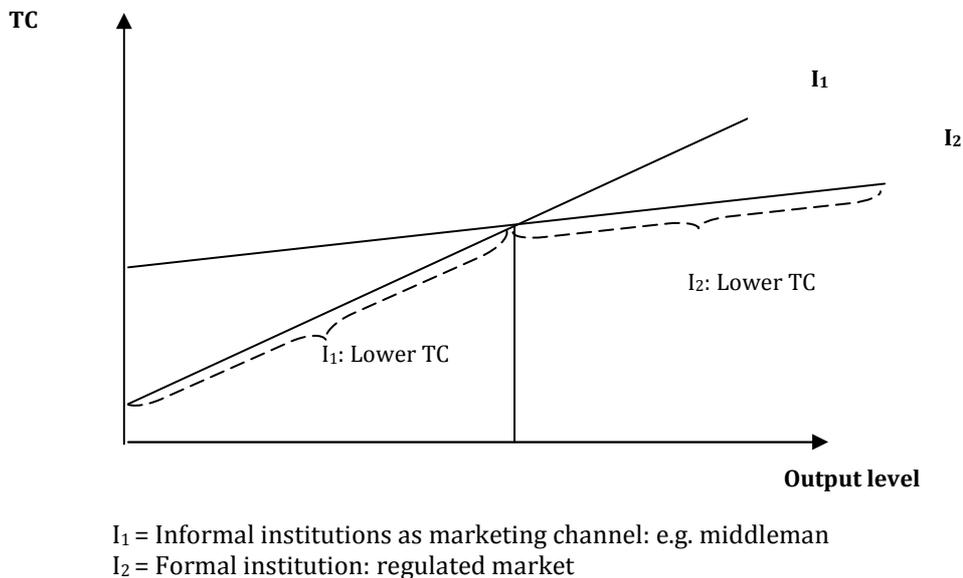
There are several problems that normally incur in quantifying transaction costs. The most common refer to problems of definition, difficulties in separation from other costs (such as production costs and transportation costs) and problems of missing observation in case transaction costs are too high to be observed. Production costs refer to the direct resources needed for the production of goods, such as labour and capital (North and Wallis 1994 in Furubotn and Richter 2005). Transportation costs are defined as the resources and time required to transfer goods and services, and they are thus dependent on the level of transport technique used (Beckmann, 1997).

Transactions also imply risks. Some of the risks that may arise during the marketing phase refer mostly to natural shocks, price risks due to their volatility, economic coordination risks and risk of opportunism (Dorward and Kydd, 2002: 3). Especially in drought-prone areas, such as Karnataka, farmers are often dependent on the weather for the success or the failure of a harvest. Great price vulnerability in the market for major crops is another major constrain farmers have to face; farmers being price-sensitive make their decisions on their cultivation patterns according to relative prices of crops. Risk of opportunism refers particularly to the possibility that an actor (e.g. the middleman) might “capture an undue share of revenues of the supply chain” (Dorward and Kydd, 2002: 3) in situations where there are significant information asymmetries and there are weak institutions to protect the contractors from opportunism. Section 2.6.2 will deal with this issue.

### 2.6.3 Farmers and the middleman: a principal-agent relationship

Recent studies conducted by IFPRI researchers (Gabri-Madhin, 2001) support the idea that the presence of intermediaries, such as middlemen or brokers, can facilitate the anonymous exchange between traders, and reduce some of the transaction costs present in the market. In cases where small-farmers are able to market low output quantities, informal institutions such as the middleman turn out a rational alternative to make market transactions. On the contrary, with large volumes of surplus sold in the market, farmers afford depreciated transaction costs and reduced variable costs per unit; formal marketing systems become in such cases more profitable solutions.

**Figure 2.6.3: Transaction costs and institutional choice (formal/informal)**



relationship. The agent (the middleman) acts on behalf of the principal (the farmer). The principal, due to information asymmetries and opportunistic behaviour of the agent is placed in an unfavourable position, in which he cannot control the agent's actions.

#### *2.6.4 Marketing and price policies in India*

The Government of India supports a price policy for farmers' agricultural produce that aims at securing remunerative prices and stimulate agricultural investments<sup>33</sup>. Minimum support prices are revised every year and formulated taking into account the minimum recommendations of the Commission on Agricultural Costs and Prices (CACP). Prices proposed by the CAPC reflect opinions shared by various stakeholders at the state level. Prices are fixed according to various variables such as the cost of production, changes in input prices, trends in international and domestic market prices and demand and supply situation<sup>34</sup>. However, because of the inappropriate integration of markets in states such as Karnataka, price differentials exists between markets situated at very close distance (Deshpande and Raveendra Naiva, 2004: 21); the Agricultural Prices Commission at the state level plays then the role of monitoring actor.

#### *2.6.5 Alternative strategies to improve farmers' linkage to markets*

Reliable and efficient markets are needed for a sound marketing system that provides remunerative prices to farmers as well as for the provision of goods to consumers at reasonable prices. Government minimum price supporting policies, contract marketing arrangements, the expansion of the role of agricultural cooperatives and corporate sector in the marketing process are all ways to increase market access to small and marginal farmers. The joint action of farmers that organise themselves in producer or self-help groups is another strategy to improve the linkage of even poorest and most marginalised farmers. Farmers involved in forms of co-production (e.g. production of same varieties and qualities of agricultural produce) might have much better marketing opportunities than individual marketing. In fact, as mentioned before, individual marketable surplus is often too small in quantity to be worthy for a farmer to take over all the transportation and transaction costs to get access to open markets. Benefits from co-production might be observed in decreasing costs per unit and increased marketing power (Dhankar et al. 2002: 23). Increasing the volume of production might have a significant impact on the volume of marketable surplus. Such benefits can motivate small farmers in rural communities to bypass exploiting middlemen and directly approach the market.

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<sup>33</sup> [http://india.gov.in/citizen/agriculture/price\\_policy.php](http://india.gov.in/citizen/agriculture/price_policy.php)

<sup>34</sup> Ibid.

## ***2.7 Concluding remarks on literature review***

A short summary of what has been said so far concludes this chapter. Agricultural growth, especially small farmers' increase in production, can lead to pro-poor agricultural growth (Diao et al., 2006). Effective service provision, particularly in key market-related services like credit, input and output markets, can play a major role in fostering pro-poor agricultural growth (Hazell and Maraswamy, 1991). In theory, governance reforms such as decentralisation - a community-driven form of governance that bring the decision-making closer to the people - are seen as effective instruments for improving the access to and the quality of services (e.g. Bardhan, 2002; Aziz et al., 2002; Sivanna and Babu, 2004; Sivanna et al. 2002; Sethi, 2006; Alsop and Kurey, 2005). In poverty reduction programmes and in the provision of agricultural services, decentralised governance systems can for example improve targeting mechanisms for service provision and subsidy distribution, thereby avoiding benefits-capture from the better-off (Rao, 2003). In the path towards agricultural growth and transformation, institutions and policies are needed to overcome market and government failures. Policies and investments need to be changed over-time and need to be locally differentiated according to the area's characteristics (Dorward, 2004). During initial phases investment in infrastructures represents a pre-conditions for further development. Afterwards, credit and input subsidies play an important role to kick-start the markets and bring about higher production volumes (Dorward, 2004). Grassroots institutional arrangements such as cooperatives and self-help groups can play a crucial role in the provision of agricultural services, guaranteeing to their members easy and cheap credit, affordable and good quality inputs and ensuring profitable output prices (Hanisch, 2006; Birchall, 2004). However, the soundness of such self-help organisations should be ensured to improve the quality of the services they provide to their members and make cooperatives and SHGs a best fit option for rural service delivery. The role of the state, the private sector and other third parties (such as NGOs and international institutions) in rural service provision still remains unclear. Liberalisation policies call for the private sector to step in the service 'market', but this still has not happened everywhere due to market failures, insufficient infrastructure and lack of incentives due to the low profitability associated with this sector. Therefore, in many developing countries the public sector still continues to provide major services.

The field research is going to explore to what extent issues discussed in the literature review are found in the reality of two rural Indian villages that are currently traversing different stages of the development process. Looking at what works, where and why in service

provision (especially of market-related services), it uses those findings to explain the differences in their development evolution and suggest strategies to improve small farmers' agricultural growth. Particularly, the study aims to:

- i) Assess access and quality of services delivered in rural financial, input and output markets, also according to different socio-economic categories of farmers. This also allows to draw some conclusions on the relationship between the level of poverty and access to services.
- ii) Investigate the potentials and constraints of governance reforms, such as decentralisation, institutional arrangements, such as input and credit subsidies, and alternative solutions, such as the spread of the grassroots organisations, in order to create the necessary conditions for agricultural growth to occur.
- iii) Add insights on the role that the state, the private sector and civil society should perform to promote agricultural growth.

# CHAPTER 3

## ANALYTICAL FRAMEWORK

An actor-centred analytical framework has been utilised to explain which are the factors that led the rural (under)development of a village. The framework is useful to simplify the reality and to understand why development happens at stages which are characterised by different service availability. It considers various possible outcomes, which are generated by different patterns of interaction and external set of variables influencing the action arena. Rural service provision represents the action where a group of actors, service providers and service recipients, are called to play. The capability of providers to deliver services and the capacity of service recipients to demand services affects the level of development of a particular region and thus the outcome of the action situation. The provision of rural services that lead to agricultural growth and overall rural development lies at the core of the action arena.

### ***3.1 IAD framework***

#### *3.1.1 Definitions*

*“The IAD framework is a broad framework for assessing institutions to determine how they affect incentives confronting individuals and their resultant behaviour”.*

*Ostrom et al., 1994*

The question which is commonly used to examine action arenas is ‘how the situation works to produce outcomes’. The action arena, the place where the action situation takes place and where different actors interact, lies at the core of the IAD framework, and its analysis helps to predict and explain individuals’ behaviour under certain institutional circumstances that produces particular outcomes. The action arena and the patterns of interaction are influenced by three external independent variables: the attributes of the physical world, the attributes of

the community and the rules-in-use that order the patterns of interactions. The IAD framework may facilitate the understanding of interrelated elements influencing a particular outcome, and to individualise knowledge gaps (Hess and Ostrom, 2004: 14). The analysis “must examine which actions are taken and how those actions affect outcomes” (ibid). Generally, to facilitate the analysis it is easier to apply the framework starting from the outcome, and evaluate both the final situation that has been produced and also the possible alternative set of outcomes that could have been generated with different institutional arrangements (ibid).

Within the action arena, action situations and actors are the objects of analysis. “Action situations are social spaces where individuals interact” (Ostrom et al., 1994), whose structure depends on the information available to individuals making decisions and on the costs and benefits deriving from each possible outcome (ibid). An action situation is composed by seven elements, namely participants, positions, actions, potential outcomes, transformation functions, information and payoffs that assign benefits and costs through their actions. Patterns of interaction, deriving from actors behaving in particular action situations and which are also influenced by the three external variables above mentioned, determine the final outcome.

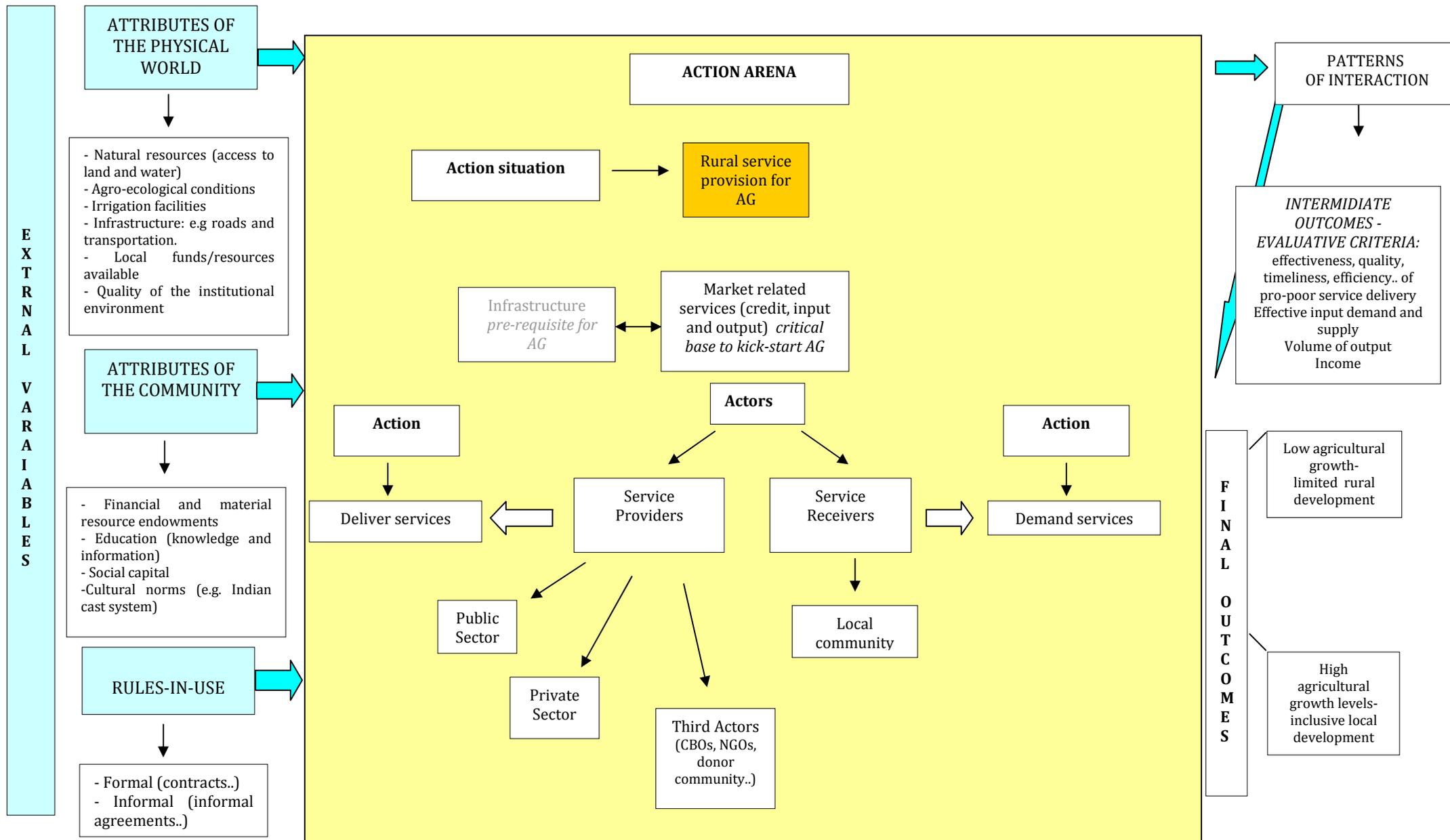
### *3.1.2 IAD framework applied to the selected study*

#### *Action arena*

The ability of service providers to deliver services and the capacity of service receivers to demand services might affect the partial result of the action situation, that is the effectiveness, quality, timeliness and efficiency of service provision. Capacity enhancement means establishing and strengthening local institutions through which the local community can participate in the decision-making and local development (Helling, Serrano and Warren, 2005: 8). Strategies that strengthen providers and receivers’ actions might improve pro-poor service delivery. For instance, it has been proved from past experiences that decentralisation can be an effective demand-driven approach to increase the ability of rural poor to demand public services but also a tool used by local governance institutions to reach the rural poor and ensure better targeting systems, improving their capacity and efficiency in the task. Since the GP serves as a linkage body between villagers and the various sector agencies, resources are more effectively allocated and reach marginalised groups. Decentralisation implies also the involvement of community-based organisations (CBOs) and NGOs. Linking public local

governance institutions, NGOs and CBOs can further strengthen the local capacity to deliver services (Helling, Serrano and Warren, 2005: iii), and make the management of the resources more transparent and efficient (ibid).

Figure 3.1.2: Use of the IAD framework to explain what influences rural service provision and the overall process of development



In India, and in the two villages considered, the Gram Sabhas (or village assemblies) are central institutions where decisions on who gets which service take place. Normally, the main target for programmes and services provided by the PRIs are marginalised categories such as SC/ ST<sup>35</sup>.

What can also influence the payoffs of the action situation are also potential synergies among services. That means, that if the provision of one service improves or worsens this could have a positive or negative effect on another service. Examples observed during the field work showed synergies between the quality of transportation channels and access to health services, or between availability of electricity and irrigation facilities (see section 5.2). Synergy-effects are present, as mentioned before, also among market-related services. Improving on-time credit availability allows farmers to demand more inputs. More input demand leads prices to rise, which is an incentive for more supply to be created and a stimulus for the flourishing of input markets. Cultivating with better quality seeds and fertilisers increases levels of subsistence production but also the surplus sellable in the market. A growth in marketable crop quantities reduces the transaction costs per unit incurred to reach markets and facilitates the use of formal marketing channels.

#### *External variables*

Moreover, three external elements are influencing the action arena. Those are the attributes of the physical world, the attributes of the community and the rules-in-use. Among the attributes of the physical world there are elements that influence the setting in which the action situation takes place. Such variables are generally taken as fixed, their nature changes only through technological change that can increase their availability and capture the benefits from other resources previously inaccessible (Hess and Ostrom, 2004: 10)<sup>36</sup>. External variables might have significant influence on the final outcome of the action situation and also affect other external factors. The attributes of the physical world include natural resources (such as access to natural sources of water and land), climatic conditions, irrigation systems and provision of basic infrastructure, such as roads and transports. Those attributes of the physical world might influence partial and final outcomes of the action situation but also other external variables such as rules-in-use. For instance, improving communication and transport systems favours farmers' mobility and market information; this makes formal reliable markets closer to producers.

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<sup>35</sup> From an interview with the GP secretary of the Shinghatagere village it emerged that the 20 percent of the budget they get from the ZP goes to such categories.

<sup>36</sup> For instance, improved technologies in the field of irrigation can increase water supply for agricultural purposes.

Individual resource endowments, such as financial and material resources, belong to the characteristics of the actors. The level of education, information availability and social capital are also important characteristics of the community that again might influence rules-in-use and outcomes. With social capital are intended cultural and social values, such as trust. Strengthening social capital through empowerment and capacity building can play a crucial role to reduce costs and risks of exchange in input and output markets, especially in impersonal exchanges with unknown people. Supervision and enforcement costs are reduced and markets' volumes increase. The presence of NGOs and CBOs can facilitate the achievement of such objectives. The level of education is another determinant that influences the access to local services from a community and the overall level of social and economic development. As it will be explained later in section 5.2, the interviews showed that people with less education or illiterate people could not benefit of some services, such as credit from formal institutions, because not capable to get through all the required procedures. The same relates to the wealth (conceived in terms of financial resources) of an individual. The non availability of on-time cash disposal prevented poorer farmers from having access to formal channels of input supply<sup>37</sup>, which normally deliver better quality inputs at lower price (see section 5.2). Also, who is producing more, because of better assets and capital to invest, benefits from increased returns and higher volumes of output to exchange. Thus, attributes of the community might also have an effect on the rules-in-use. The result is that often richer and more educated farmers benefit from effective, timely and good quality market-related services, while poorer farmers have to cope with poorer services.

Rules-in-use within market-related services delivery refer to formal and informal rules that govern the interactions among participants of the action arena. A greater understanding on how the service is delivered, whether through formal contracts or informal rules, might facilitate in individualising problems and elaborate strategies that might lead to better outcomes. Formal and informal rules for service delivery extend to all the markets taken into consideration. In the credit market, especially among small and marginal farmers who usually lack collaterals and have very limited cash at disposal, informal systems of lending are the most common phenomena. Formal Financial Institutions (FFIs), such as banks and post offices, that work with formal contracts reach generally a low number of farmers in need. In input markets, private shops and informal systems to collect seeds and fertilisers are the dominating the market (see section 5.2), instead of formally government-controlled providers that fail to effectively serve most marginalised farmers. Marketing services are mostly governed by the informal sector as well; the middleman remains the preferred channel to sell the products of many small-farmers, who still do not benefit from an easy and

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<sup>37</sup> Agricultural Department and V.S.S.B.N. agricultural cooperative society.

cheap access to markets. Therefore, it emerges that informal rules are dominating and that rules-in-use are effected by the other external variables, such as education, financial situation, natural resources and infrastructure available.

### *Patterns of interaction*

“Given a situation with identifiable participants and actions, it is also useful to examine how participants actually behave” (Hess and Ostrom, 2004). Patters of interaction depend, among other factors, on the availability of information to the actors of the action arena and on the costs and risks involved in taking diverse action. This leads the individuals to believe that a particular behaviour in a determined situation can generate productive outcomes. Initial conditions characterising the actors involved in the action arena influence their opportunities and behaviour and ultimately the final outcome.

### *3.1.3 Concluding remarks on the IAD framework applied to the selected study*

To sum up, in the action arena that is analysed in this study, the public, private and third sector on one side and the rural community on the other interact within the action situation with the roles of service providers and service recipients. The ability of service providers to deliver services and the capacity of service receivers to demand services affect outcomes of this action situation, in terms of pro-poor effective service provision and of level of agricultural growth and rural development. Many other factors have an impact on the final outcome, since development is a complex process. External variables referring to the attributes of the physical world, to characteristics of the rural community and rules-in-use in service provision are significantly affecting the whole action arena and resulting outcomes. All those variables will be discussed in detail in section 5.2.

## ***3.2 Reformulating the research hypothesis in light of the theoretical and analytical arguments***

Before proceeding with the empirical part, it is useful to reformulate the initial research hypothesis in light of the arguments identified in the theoretical and analytical part. Those arguments suggest that there are several factors that promote or hinder the process of development of an economy. The level of access and quality of services is supposed to be one of them. The type and implementation of institutional arrangements, the quality of the

institutional environment, and certain exogenous factors affecting the action arena explain the diverse development paths taken by the two economies.

Once basic infrastructural facilities have been introduced, the literature review also evidences how the provision of market-related services plays a central role for increasing credit, input and output volumes that lead to small farmers' agricultural growth. Which strategies are required to improve service accessibility, quality, equitability and efficiency in those markets is a major question policy-makers should be able to answer in order to stimulate economic development. Larger participation of CBOs in the credit sector, state intervention to kick-start input and output markets through targeted input and credit subsidies, larger investments in infrastructure to support output markets, the spread of alternative marketing systems, e.g. agricultural cooperatives, are some of the policies discussed in the literature that, if properly applied, may enhance farmers' linkages to productive markets and shift the two economies to higher levels of economic development. Public and private sector and civil society are all called to interact within the action arena and share responsibilities according to their potentialities and constraints. The study attempts to show to what extent those arguments are confirmed by the empirical evidence.

# **PART 2**

## **Case Study Research**

# CHAPTER 4

## METHODOLOGY

### ***4.1 Sources of information***

#### *4.1.1 IFPRI quantitative data*

Quantitative data collected by IFPRI<sup>1</sup> are sources of information used by the study as a starting point to analyse the role of rural service provision for successful agricultural and rural development (project proposal, 2007). They include information on poverty estimates and service availability in the area of research in the period of time between the beginning and the end of the 90s. Such data provide general initial information and a benchmark for further comparison with the qualitative data collected during the field work (see chapter 5).

According to the poverty estimates provided by Deaton (2003) for state specific regions<sup>2</sup>, Mandya district observed a rather large reduction of poverty (-16,5 percent) in a relatively short period of time. In 1993/94 Mandya had poverty rates of 39,6 percent while in 1999/00 the rate was of 23,1 percent. As far as the provision of services is concerned, IFPRI econometric analysis considered service accessibility in the area of drinking water, transportation, health assistance, primary school, secondary school and post office. Primary education, high school and post office are taken as single variables, while drinking water, transportation and health assistance are taken as composite indices<sup>3</sup>. Mandya district

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<sup>1</sup> I thank Katharina Raabe, postdoctoral fellow at IFPRI, for the information and insights given that have been used in this section.

<sup>2</sup> Deaton poverty estimates are derived from the 50<sup>th</sup> and 55<sup>th</sup> round of the National Sample Survey in 1993/94 and 1999/00.

<sup>3</sup> "Drinking water includes canal, hand, tank, tap, tube-well, and well water; transportation includes bus and railways services; health includes hospital, dispensaries, primary health care centres, and primary health care sub-centers. The composite index and the respective rate of change is computed

compared relatively well in terms of service availability at the beginning of the 90s and observed a mixed performance in the rate of change of service availability. More specific figures are given in the table 4.1.1a.

**Table 4.1.1: Data on service provision in the period of time 1991-2001**

	Index_ Drinking Water	Index_ Transports	Index_ Health	index_ Primary School	index_ Higher School	index_ Post Office
<b>1991</b>	.	0.72	.	0.89	0.44	0.87
<b>2001</b>	0.95	0.59	1.04	0.86	0.79	0.70
<b>Rate of change</b>	.	-0.72	.	-0.16	0.28	-0.17

Those data have been used to build a matrix to classify the selected districts as good or bad performers in terms of service availability and (un)successful in terms of poverty reduction (Raabe, 2007). Mandya district emerged to have achieved large poverty reduction while performing differently in terms of change in service availability (see section 5.3).

Results given from the quantitative data show that the provision of basic infrastructural services such as transportation have worsened in the past ten years. The availability of services such as primary school facilities and post office registered a marginal decline as well. On the contrary, high school facilities improved. Qualitative data collected during the field work have taken into consideration a wider range of services, and concentrated particularly on agricultural services.

#### *4.1.2 Qualitative data collected during the field research in the two selected villages*

Information used to test the research hypothesis are also based on qualitative information gathered during PRA exercises and interviews conducted in the two village case studies (see section 4.2 for the field work description). To analyse access and quality of services questionnaires for both service providers and service recipients have been used. After the interviews with service recipients, interviews with actors providing market-related services were conducted. Separated questionnaires have been used for different service providers.

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for variables of service availability that are normalized with respect to the average across all Indian districts for each point in time" (Raabe, 2007).

### *4.1.3 Secondary data on case studies – at block and village level*

Secondary data on the research area have been additional sources of information. GP secondary data (the two villages belong to the same taluk but to different Gram Panchayats) provide information on the village conditions, including data on infrastructure and general service availability. Service providers for which secondary information is available include the Agricultural Marketing Producers Committee (APMC), the two Gram Panchayats and the agricultural cooperative society. Those are some among the actors responsible for the delivery of market-related services.

## **4.2 Field study approach**

### *4.2.1 Village and household selection*

The following are the criteria used for the village selection:

- i) A preliminary list of villages has been drafted from the quantitative data collected by IFPRI at HH and village level. The list includes villages which have been covered by the village quantitative survey but not by the HH survey.
- ii) In order to select more or less developed villages in the district in terms of poverty levels and service provision, the opinion of an expert has been asked. The preliminary list has been shown to the Chief Planning Officer (CPO) of the Mandya Zilla Panchayat.

Shinghatagere (Malavalli GP, Maddur taluk) was selected as the relatively more developed village and Chunchanagahalli (Bellur GP, Maddur taluk) as the relatively less developed<sup>4</sup> in terms of service provision and poverty levels.

As far as the HH selection is concerned, the GP bill-collector, who has detailed knowledge on the villagers' conditions, helped to select with correct and full information the HHs samples. In total, 24 stakeholders in each village have been interviewed. Preference has been given to farmers, because the scope of the research is particularly concentrated on the availability of

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<sup>4</sup> Villages have been selected taking into consideration also their size and composition, in order to facilitate PRA exercises.

agriculture-related services. Nevertheless, it has also been tried to include, where possible, the service perception of marginalised groups, such as women, SC/ST and OBC. Since the attempt was to analyse the factors that led to improved service availability for better-off farmers, in the case of Shinghatagere, the relatively successful one, roughly 2/3 (some at the borderline have been considered APL) of the samples have been selected among APL (Above Poverty Line) people and 1/3 among BPL (Below Poverty Line) people. In Shinghatagere the following HH samples have been selected:

**Table 4.2.1a: Household selection - Shinghatagere -**

	Male	Female	Female Head	TOTAL
<b>APL</b>	10	-	1	<b>11</b>
<b>APL/BPL</b>	4	2	1	<b>7</b>
<b>BPL</b>	1	-	2	<b>3</b>
<b>OBC</b>	-	1	1	<b>2</b>
<b>SC</b>	-	1	-	<b>1</b>
<b>TOTAL</b>	<b>15</b>	<b>4</b>	<b>5</b>	<b>24</b>

APL= Above Poverty Line

BPL= Below Poverty Line

OBC= Other Backward Classes

SC/ST= Schedule Caste/Schedule Tribes

In the relatively less successful village in terms of poverty levels and services, BPL people, who are supposed to have worse access to rural services, have been the target and majority of the interviewed. The following are the selected HHs<sup>5</sup> per category:

**Table 4.2.1b: Household selection - Chunchanagahalli**

	Male	Female	Female Head	TOTAL
<b>APL</b>	7	1	0	<b>8</b>
<b>BPL</b>	6	2	4	<b>11</b>
<b>OBC</b>	2	1	-	<b>3</b>
<b>SC</b>	-	-	-	<b>-</b>
<b>TOTAL</b>	<b>15</b>	<b>4</b>	<b>4</b>	<b>23</b>

<sup>5</sup> No SC/ST present in the village.

In both villages, categories such as SC/ST and OBC people have been only marginally included because not present or not able to respond. Women's opinion has been included as far as possible.

#### *4.2.2 PRAs exercises and pilot interviews*

PRA exercises, such as social mapping and service ranking, have been used to understand importance, accessibility, frequency, magnitude of usage and interlinkages among services. However, PRA exercises, e.g. service ranking, provide an incomplete picture of the importance of services for the rural community. In fact, in the first village, such exercises were attended only by SHG members, mostly women. As observed later during individual interviews, their service priorities differ significantly from those of male farmers.

Pilot interviews have been first conducted to test the questionnaires and revise the questions when incomplete or inappropriate. Simplifications and further guidance on the meaning of some questions resulted necessary in the course of the pre-testing phase, to avoid lack of answers or misunderstandings. The testing of the questionnaires and the PRA exercises has been used as a bottom-up approach to choose market-related services as the focus of research.

#### *4.2.3 Semi-structured interviews with service recipients*

The findings from the social mapping, PRA exercises on services and some first discussions and observations helped to get an overview on the village's level of development and on its situation in terms of service conditions. The pre-testing made clear that many of the questions asked were too difficult and too wide to be answered. The listed questions have served as general guidance; then, according to singular cases, other more specific questions or extra-information have been enquired.

The semi-structured interviews conducted with a sample of service recipients aimed to understand what works, where, and why in service provision. The questionnaires for the service recipients contained four main parts:

- i) General information on the interviewees, such as occupation, size of the family, size of the land, whether they produce market or subsistence crops and major problems they face.

- ii) Ranking of the most important services for the improvement of their living conditions. Individual perception on the access and quality of the services provided, on positive and negative changes in the past ten years, and reasons for such positive/negative changes.
- iii) Specific information on market-related services: credit, input and output markets. As far as financial markets are concerned, information (where possible) included the extent to which the interviewees had access to credit, the loan amount, the source of credit and the repayment performance. Questions on input supply aimed to gather qualitative data on access, prices and quality of inputs, according to the different providers, and their changes in the past fifteen years. The section on the output markets focused primarily on getting information on the marketing systems of the interviewed farmers, whether they are using formal or informal channels, on output prices, on information channels, and on their reinvestment patterns.
- iv) An additional section considered the involvement of the local community in users' or consumers' organisations and which extra-services members might get access to.

#### *4.2.4 Interviews with market-related service providers*

As final step of the field work, semi-structured interviews with service providers have been conducted to counter-check the information given by the local community on the access and quality of rural service provision. Through a bottom-up approach, some of the most significant providers of market-related services have been individualised and later interviewed. The group of providers interviewed includes actors from the public and private sector, such as members of the V.S.S.B.N. agricultural cooperative, of the Agricultural Producers Marketing Committee (APMC), the president and secretary of the two GPs and owner of a rice mill (see section 5.3).

#### *4.2.5 Limitations regarding the collected data*

Practical and context-specific constraints have influenced the process of data collection and the soundness of the information gathered. Generally, restricted time during the field research limited the comprehensiveness of the analysis. Not all service providers have been

interviewed, and as far as service recipients are concerned, difficulties in getting their time availability resulted a major constrain<sup>6</sup>. Other factors that have constrained the depth and sometime the reliability of the qualitative analysis refer to the capacity of the local community to provide exact information; this is true especially for less educated or illiterate people, and this is also the reason why they have been only a marginal target of the research, although included in the research's initial intentions. If in some cases it has not been possible to respect the agreed criteria for the selection of the households to interview, it is either because the selected categories were not present in the village<sup>7</sup> or because not owning some characteristics central to the analysis<sup>8</sup>.

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<sup>6</sup> Unforeseen events such as village weddings and festivals, beside the work in fields, further challenged the smooth carrying out of the interviews.

<sup>7</sup> Such information was discovered later, once the field work activities had already been started.

<sup>8</sup> In Chunchanagahalli for example, it has been very difficult to find BPL farmers that had enough productive land to produce marketed-surplus.

# CHAPTER 5

## ANALYSIS OF THE RESULTS

### *5.1 Scope of the qualitative analysis*

Qualitative analysis aims to investigate and ultimately explain what works and what does not work in pro-poor rural service provision for small-farmers' agricultural growth. It also provides explanations for why the two villages have reached rather different levels of development along the path that leads to agricultural transformation and overall rural development.

Specific patterns of interaction, internal and external variables and the nature of the institutional environment have determined a particular set of outcomes. Given that individuals who behave in response to certain institutional circumstances, "qualitative analysis helps to diagnose the reasons why institutions are failing to deliver the outcomes that are desired by multiple stakeholders and use this knowledge to propose arrangements that are likely to be more effective in meeting stakeholders needs" (Smajgl, Vella and Greiner, 2003). Baseline information, direct data collection and observations helped to look through magnifying lenses at the action arena and grasp inexplicit factors and interlinkages responsible for the resulting outcomes. A wealth-disaggregated analysis has been used to facilitate the understanding of how services are accessed and perceived by different types of service recipients. Such analyses suggest the need for the formulation of differentiated institutional arrangements for pro-poor rural service provision.

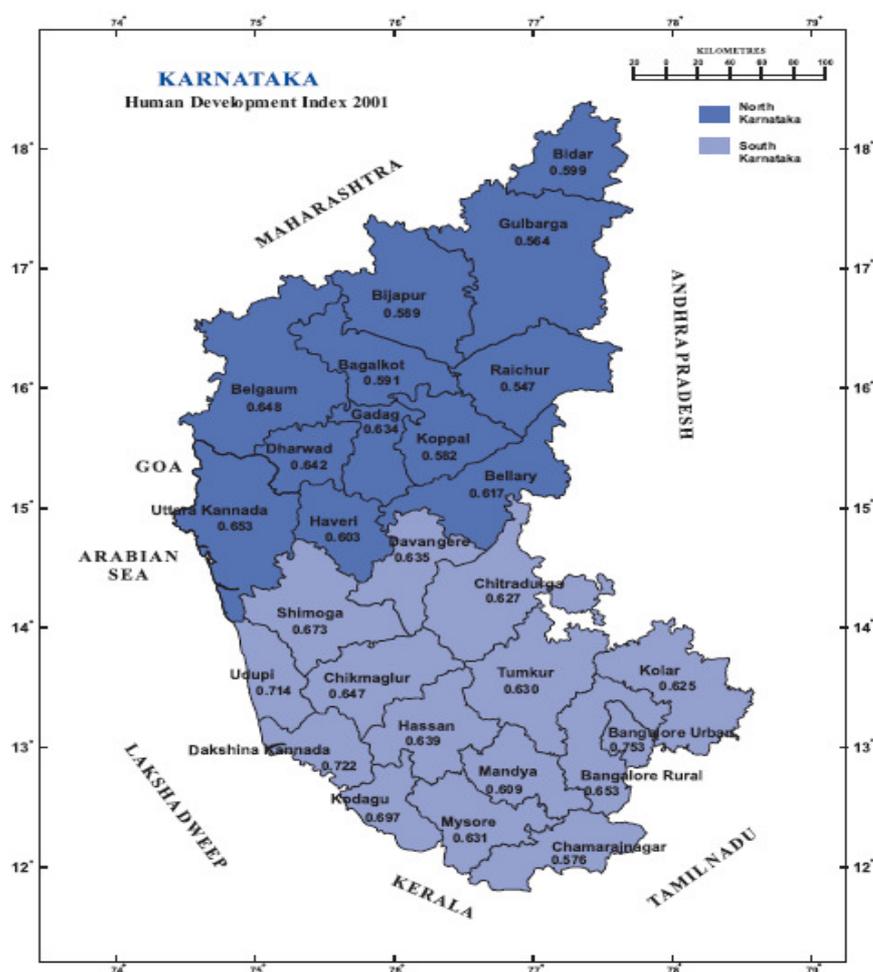
Hypothesis and conclusions drawn in the following sections were derived with the help of data and information collected during field interviews with service providers and service receivers.

## 5.2 The context: socio-economic characteristics of the selected area

### 5.2.1 Mandya district

The district of Mandya is a semiarid region located in the south of Karnataka. This area covers roughly 15 districts which are characterised by wide disparities; it is a rather prosperous state, but it has backward regions that are comparable to the poorest rural areas of the country (World Bank, 2006: 22).

Figure 5.1.1: Human Development Index in Karnataka



Source: Karnataka Human Development Report, 2005

Districts covering mostly unirrigated areas, such as Mandya, performed very differently compared to the districts on the coast. According to the Human Development Index of 2001 referring to the 26 districts in Karnataka (see figure 5.1.1), Mandya is ranked at the 19<sup>th</sup> place, the same position as ten years before (Karnataka HDR, 2005).

In recent years Mandya observed high agricultural growth rates and specialised the production on commercial crops. There are seven talukas in Mandya. Large areas within the district are cultivated under paddy and sugarcane (Deshpande and Raveendra Naiva, 2004: 10). Mandya district started in the 30s to be provided with irrigation facilities. However, the state is characterised by frequent drought-prone areas and water supply in many districts is dependent on weather conditions. The average size of the holdings is rather low and agriculturalists are mostly small-farmers (ibid).

### *5.2.2 Maddur taluk*

The Maddur taluk has 86,6 percent of cultivable land, of which the 52 percent is irrigated. Around 93 percent of the agricultural families are small and marginal farmers. The taluk has 42 Gram Panchayats. Ragi (cultivated in 9000 hectares of land) and maize and other grains are grown in rain-fed areas, while paddy (11600 hectares of land) and sugarcane are grown in irrigated areas (Maddur APMC, secondary data).

It has a total population of 125426, out of which 16331 (13 percent ca) are SC and 607 (0.48 percent ca) are ST people; around 81 percent of the families are engaged in agriculture. There are in total 26 branches of the V.S.S.B.N. (agricultural cooperative society) with 13994 members in total, out of which 11 percent ca are SC/ST members. As far as credit and saving facilities are concerned, there are 3 Primary Land Development Banks and 11 Rural Commercial Banks (RCBs) in the taluk. Within the territory, there are 4 sub-regulated markets<sup>9</sup>.

### *5.2.3 Village case-studies<sup>10</sup>*

#### *Shinghatagere*

The Shinghatagere village is located at 1 Km from the Gram Panchayat Madarahalli<sup>11</sup> and has a total geographical area of 322 hectares, out of which 150 are cultivable hectares. The village benefits from major irrigation facilities (canal irrigation, covering 204 hectares), and has

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<sup>9</sup> Source of information contained in this paragraph: [http://nitpu3.kar.nic.in/samanyamahiti/smenglish\\_0304/default.htm](http://nitpu3.kar.nic.in/samanyamahiti/smenglish_0304/default.htm)

Government of Karnataka official website.

<sup>10</sup> Source for both villages: official data contained on the Government of Karnataka website, GP official documents, field observations and discussions with local experts.

<sup>11</sup> 5 villages under Madarahalli GP: Madarahalli, Shinghatagere, Kadiluvagilu, Laxmegowdanadoddi and Ambarahalli.

other irrigated hectares provided with tanks. The total population counts 609 people (the male/woman ratio is almost 1:1). No Scheduled Tribes (ST) are living in the village and there are 2 Scheduled Caste (SC) families. There are 115 families employed in agriculture. The landholding-units are 104, of which the large majority is owned by small and marginal farmers (44 are the small farmers units and 54 the marginal ones). Paddy (the total cultivated area is 79 hectares), sugarcane (62 hectares), cereals and ragi<sup>12</sup> (9 hectares) are the major crops cultivated. The village is located on the roadside, and therefore it has relatively good access to roads, which are in relative good conditions, and transports. Electricity is regularly provided. The village has 8 water tanks and good quality drinking water<sup>13</sup> is easily accessible to all the villagers (most of them have water taps in front of the door). A functioning public lower primary school and Anganwadi<sup>14</sup> centre are present within the village and offer basic social and health services. No hospital<sup>15</sup>, bank<sup>16</sup> or post office<sup>17</sup>, veterinary institution, milk or agricultural cooperative society<sup>18</sup> are present within the village<sup>19</sup>. The agricultural cooperative society (V.S.S.B.N.) is located in the GP headquarter, at 1 Km of distance. It counts 1014 members, 200 of which are SC people. From field observations it was possible to observe that housing conditions are generally good; just a small minority of people is still living in huts. Males are predominantly working in fields while women are responsible for household activities and the processing of some food crops.

### *Chunchanagahalli*

Chunchanagahalli was originally part of another taluk, but since few years it has been integrated to Maddur. It is situated at 3 Km from the Bellur GP<sup>20</sup>, and has a geographical area of 141 hectares, out of which 104 ha are cultivable. The village is covered by minor irrigation facilities: no canal irrigation is available, but rather pump set facilities are used to irrigate fields. The construction of pump sets took place at a slow pace (although it has been more rapid in recent years<sup>21</sup>); initially, just very few farmers managed to receive the permission to construct from the local governance institutions and could afford such investment. Nowadays there are 29 pump sets available for agricultural purposes, generally belonging to well-off

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<sup>12</sup> Ragi: staple food mostly present in Southern India.

<sup>13</sup> Estimates from the GP secretary give a ratio of 1:15 water pump/individuals, while the national average is 1:50.

<sup>14</sup> Anganwadi centre: childcare centre providing basic services at the community level.

<sup>15</sup> The nearest Public Health Centre (PHC) is situated at 5,5 Km of distance.

<sup>16</sup> The nearest Agricultural Development Bank and Rural Commercial Bank are located in Maddur city.

<sup>17</sup> Nearest post office at 0,5 Km.

<sup>18</sup> The nearest distance to the Agricultural Department is 8,5 Km. The agricultural cooperative society is responsible also for the distribution of consumer goods, such as rice and kerosene.

<sup>19</sup> A milk collection point is located at little distance from the village though.

<sup>20</sup> 8 Villages under Bellur GP: Bellur, Bannahalli, Hulikere, Hallikere, Chunchanagahalli, Beemanahalli, V.N. Doddi and N.T. Doddi.

<sup>21</sup> 3 pump sets have been constructed from 2005-2006 (26) and 2006-2007 (29).

farmers. Small-farmers can irrigate their lands by renting the pump sets for Rs. 25 ca. per hour. The introduction of such irrigation facilities helped to increase the land productivity and made possible to cultivate crops such as paddy and sugarcane. Infrastructure is still underdeveloped. Roads are in bad conditions (minor roads are not cemented or are just paths) and public transport facilities are not easily available (the bus stand is located at 1,5 Km). The village is roughly of the same size of Shinghatagere, and has 649 inhabitants. No SC/ST people are present. The number of agriculturalist families is 219; there is just 1 large farmer and a high number of marginal farmers (191) who own an area of only 63 hectares, that means an average of land holding of 0,33 hectares. The cultivable area is rather small, and small are the cultivated areas under major crops, both compared to other villages within the same GP and to Shinghatagere<sup>22</sup>. The agricultural cooperative society (V.S.S.B.N.) is located in the GP headquarter, Bellur. It counts 240 members, out of which 16 are SC members<sup>23</sup>.

### ***5.3 State of development and analysis of rural service provision in the two villages***

#### *5.3.1 Where are the villages placed within the process of development?*

To begin the analysis and explain how the two villages are performing, what follows is going to consider some of the features that characterise their stage of development.

Chunchanagahalli still relies on low productive and mostly subsistence agriculture, and has experienced a limited development in terms of infrastructure so far. Transportation systems did not register any significant changes in the past fifteen years, or they have even worsened. Water supply is one of the few sectors where some progress has been visible, both in terms of drinking water and irrigation facilities; those are still depending on climatic conditions and groundwater sources, though. Inadequate infrastructures to support input, output and financial markets is a major cause for the backwardness of this village and for the low investments in agriculture (see section 5.4). To fill the deficiencies left by formal institutions, the village strongly relies on the informal sector. By contrast, Shinghatagere benefits from profitable intensive technology and major irrigation facilities that favour higher levels of

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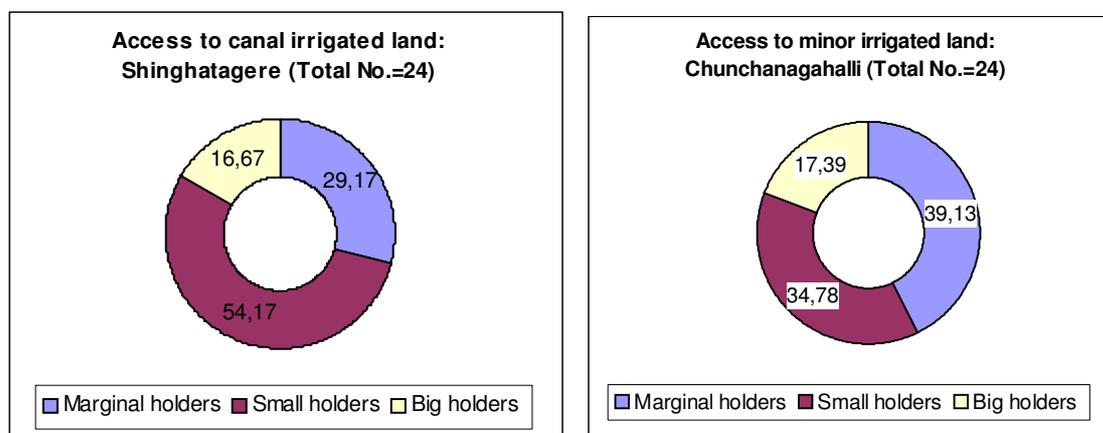
<sup>22</sup> The cultivated area under paddy in S. is 79 ha compared to the 10 ha in C.. As far as sugarcane is concerned: 62 ha. in S. and only 10 ha in C. (the number of ha cultivated under sugarcane decreased substantially from 21 ha in 2005-2006 to 10 ha in 2006-2007).

<sup>23</sup> Information contained in this section is derived from secondary data collected at the Bellur GP.

productivity in agriculture. Market agriculture is expanding but its uptake is constrained by still inadequate financial, input and output markets. Just a minority of farmers (the better-off) can in fact get access to reliable and on-time credit and input markets. Efficient and profitable output markets are lacking for most of the crops cultivated.

External factors have also constrained the development of the villages and influenced the effectiveness of service provision<sup>24</sup>, such as limited access to land and water, levels of education and social capital<sup>25</sup>.

**Figure 5.3.1a: Access to irrigated land: category-wise (percentages)**



Marginal holders: land holding  $\leq 1$   
 Small holders: land holding between 1 and 5  
 Big holders: land holding  $\geq 5$

*Source: primary data collected during the field research*

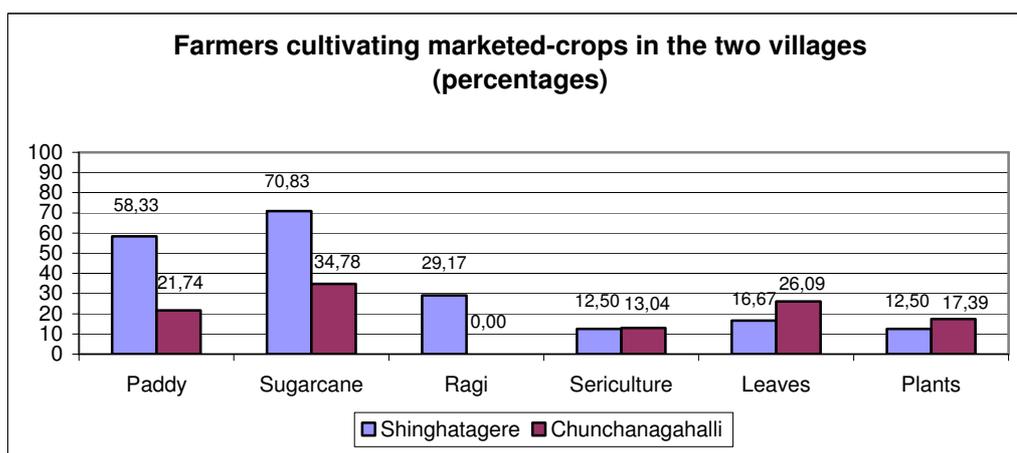
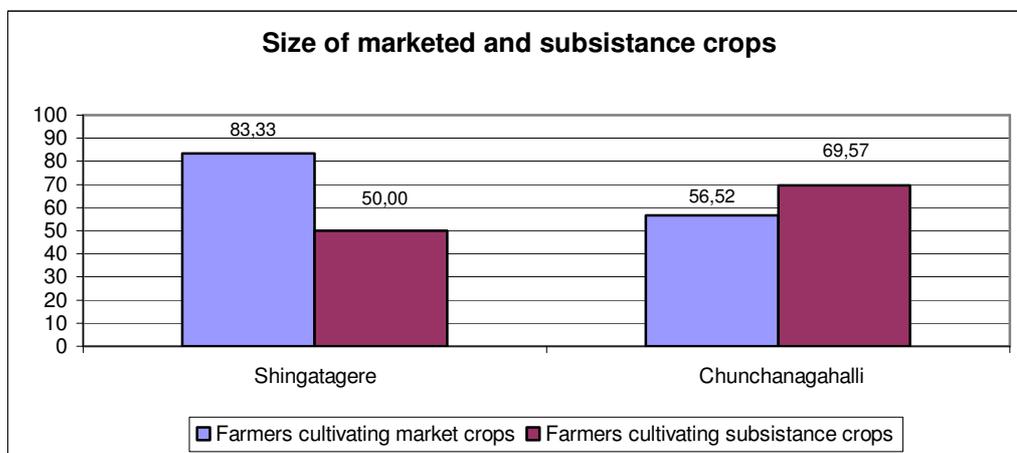
As can be seen in figure 5.3.1a, in Chunchanagahalli, the marginal-holders are the largest category interviewed (39.13 percent). Limited access to land is coupled with scarce water availability and the dependency of the water supply systems on groundwater resources. This is a major factor that has so far determined low agricultural productivity and small quantities of surplus production. This is visible in figure 5.3.1b, which shows that the majority of crops cultivated by farmers in Chunchanagahalli is still used for subsistence purposes. Figure 5.3.1c displays also the volumes of marketed crops. Ragi, one of the major crops cultivated, is used primarily for subsistence and no surplus production is left for the market. The 21.74 percent

<sup>24</sup> The following set of figures and tables are drawn from the primary data collected during the field visit.

<sup>25</sup> There has been an increasing recognition in recent years of the importance of social capital (e.g. Collier, 2002; Putnam, 1993; Ostrom, 1990; Rankin, 2006), especially in economies with low levels of institutional development. Community participation in CBOs is a mean to measure to some extent the goodness of the social capital available.

of the interviewed farmers, mostly the better-off, are able to market small surplus quantities of paddy. 34.78 percent are cultivating sugarcane and are able to sell it to sugar factories<sup>26</sup>.

**Figure 5.3.1 b and c: Marketed and subsistence crops**



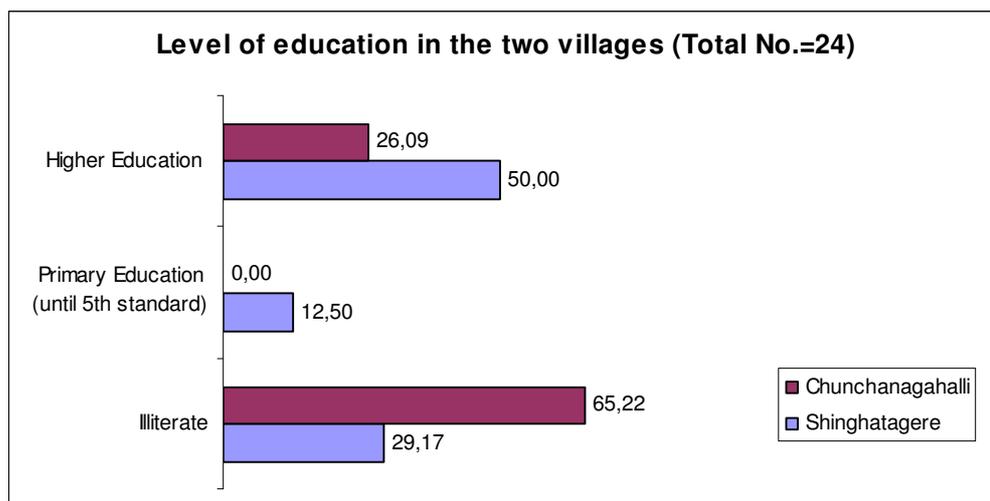
Source: Primary data collected during the field research

In Shinghatagere, a relatively large percentage of the interviewed are small farmers (the 54.17 percent), having holdings between 1 and 5 acres, and the 29.19 percent are marginal farmers, with land holdings smaller than 1 acre. Although farmers do not have large size holdings, land productivity is relatively high and they manage to generate some surpluses thanks to canal irrigation systems and better assets and services available. The 83.33 percent of the farmers are able to sell part of their crops into the market (against the 50 percent in Chunchanagahalli), particularly paddy (58.33 percent) and sugarcane (70.83 percent).

<sup>26</sup> Contrary to farmers in S., farmers in C. do sell all the sugarcane output to factories (quantities agreed in the permission vary according to information regarding the assets of the farmer, contained in the RTC). In S. some of the farmers having extra-surplus were selling sugarcane to private crushers.

Literacy levels characterising the two rural communities also differ (see figure 5.3.1d). Among the interviewed people in Chunchanagahalli, the 65.22 percent revealed to be illiterate<sup>27</sup> against the 29.17 percent in Shinghatagere. A high percentage of people (50 percent) also received higher education in Shinghatagere, while this figure reaches only the 26.09 percent in the case of Chunchanagahalli.

**Figure 5.3.1d: Literacy levels in the two villages**



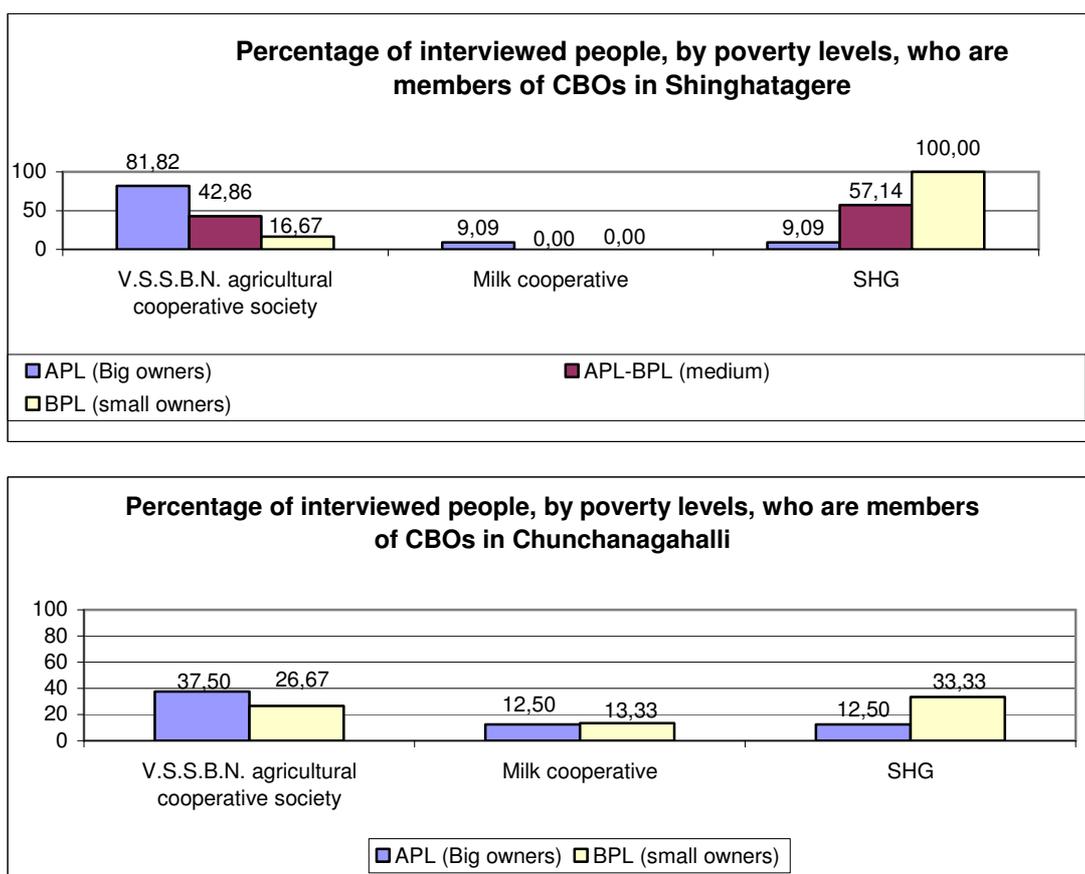
*Source: Primary data collected during the field research*

Intuitively, people who received higher education belong primarily to the APL category of people (80 percent in the case of S. and 37.50 percent in the case of C.), while BPL people are usually illiterate or just received primary education (66.67 percent in S. and 73.33 percent in C.).

In both villages, people do have access to CBOs such as SHGs and cooperative societies (agricultural and milk dairy), and to School Development Committees (SDCs). Normally all such forms of CBOs, except SHGs and SDCs, are located outside the villages, at distances varying between 1 and 3 Km. As figure 5.3.1 e reveals (data shown category-wise), Shinghatagere seems to benefit from higher participation in stakeholders' groups.

<sup>27</sup> In the majority of the cases both husband and wife are illiterate.

**Figure 5.3.1 e: Members of CBOs in the two villages**



Source: Primary data collected during the field research

In fact, many better-off farmers in Shinghatagere (the 81.82 percent) are members of the V.S.S.B.N., more than double compared to the APL members of the cooperative in Chunchanagahalli. The number of members of the agricultural cooperative sharply decreases among small and marginal farmers (for APL\_BPL people the percentage is 42.80 and for BPL people is 16.67). In Chunchanagahalli, the contrast between the number of APL and BPL members of the agricultural cooperative society is not so significant; both APL and BPL farmers do show relatively low levels of participation. SHG engagement is higher among the lowest categories of farmers, small and marginal, in both the villages, especially in Shinghatagere. Explanations for such different levels of participation will be given in section 5.4. Chunchanagahalli has its own milk cooperative society within the village, which has reduced considerably the burden for women usually responsible for the delivery of the daily milk production<sup>28</sup>. As a consequence, the number members of the milk cooperative is higher than in Shinghatagere and more BPL people have access to it.

<sup>28</sup> The delivery of daily milk production to the closest milk diary or collection point has been acknowledged as a major concern for the interviewed women. Political interests from GP members made possible the establishment of the milk cooperative society within the village.

While this section provided some arguments to explain where the two villages are placed within the process of agricultural transformation and overall rural development, the next one will add insights on the performance of rural service delivery.

### *5.3.2 Where are the villages placed according to service provision?*

A preliminary picture on formal/informal service provision in the two villages has been gathered through PRA exercises and pilot interviews. PRA exercises were intended to get a general idea on which services are available to the people target of the interviews, on their importance, distance and frequency of usage. PRA exercises and pilot interviews have been very important sources of information as starting point. However, as mentioned in section 4.2.2, PRA exercises gave quite different results in terms of service ranking (see annexes), since the outcome of the group discussion was biased by the group composition or by the goodness of the discussion<sup>29</sup>.

The carrying out of further interviews with service recipients in the two villages made quite clear which services are of utmost importance for the rural poor. In table 5.3.2a, some of the findings are summarised.

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<sup>29</sup> PRA exercises are fully community-driven and are based on 'handing the stick' to the target groups. Thus, the possibility that 'some may speak louder or more than others' can be only marginally avoided.

**Table 5.3.2 a: Perceived service importance in the two villages**

<b>Villages</b>	<b>Ranking</b>	<b>Primary importance</b>	<b>Secondary importance</b>
<b>Shinghatagere</b>		Cooperative and bank credit	Health facilities
		Provision of inputs by the Agr. Dep. and V.S.S.B.N.	Social services (school and Anganwadi centre).
		Infrastructure (roads and transportation)	Housing
		Water supply: IRR and DW	Drainage
<b>Chunchanagahalli</b>		Water supply: IRR and DW	Drainage
		Housing schemes	Social services (school and Anganwadi centre).
		Infrastructure (roads and transportation)	
		Milk diary cooperative society	

Source: Primary data collected during the field research

Water supply, particularly irrigation, is depicted for the large majority of farmers living in Chunchanagahalli as the most important factor that has contributed to increase their level of development and reduce poverty. Housing schemes are also valued as services of primary importance<sup>30</sup>. Infrastructural services, such as roads and transportation, are considered essential for the further development of the village. The presence of the milk cooperative society within the village has been acknowledged by women as determinant to improve their quality of life. By contrast, cooperative and bank credit, together with inputs delivered by the agricultural department and agricultural cooperative society are among the highest priorities for farmers in Shinghatagere. This is what has emerged from the interviews among stakeholders and what somehow differentiates the service priorities in the two villages<sup>31</sup>.

The following two tables (see table 5.3.2b and c) provide an overall assessment of the service performance, or else how services are actually accessed by the rural community. They contain information on services provided, their (perceived) quality and sum up which further services are required. Data are displayed according to poverty level categories; the presence

<sup>30</sup> A relatively large number of poor people in Chunchanagahalli is still living in 'pucca' houses.

<sup>31</sup> In Shinghatagere, water supply (irrigation and drinking water) is also perceived as important, although it has not been very often explicitly mentioned. This is probably because water supply does not constitute a problem in the village since a long time. Canal irrigation was introduced in the village more than 30 years ago.

of a particular service does not automatically imply same access and quality for all. Therefore, it is supposed that according to the socio-economic status, farmers will show different opinions on service provision and will manifest different service requirements.

**Table 5.3.2b Perceived service access according to socio-economic categories: Shinghatagere**

	Category of service recipients					
	APL (Big owners)		APL-BPL (medium)		BPL (small owners)	
<i>Services</i>	<i>Service quality</i>	<i>Services needed/changes</i>	<i>Service quality</i>	<i>Services needed/changes</i>	<i>Service quality</i>	<i>Services needed/changes</i>
<b>Water supply</b>	Very good quality DW and IR	Not mentioned	Very good quality DW	Not mentioned	Very good quality DW	Not mentioned
<b>Infrastructure</b>	Improved basic infrastructure, but quality of roads to improve	Not mentioned	Improved basic infrastructure, but roads to improve	Not mentioned	Improved basic infrastructure (transportation)	Not mentioned
<b>V.S.S.B.N.</b>	Satisfaction with V.S.S.B.N.	Inputs (expanded access)	Satisfaction with V.S.S.B.N. and milk diary	Milk Diary (distant)	Satisfaction with V.S.S.B.N. (access and prices)	Milk Diary (distant)
<b>Credit (by FFIs)</b>	Improved access	Credit (larger amounts)	Improved access	Credit (larger amounts)	Scarce access to FFIs	Credit (access)
<b>Primary School, PHFs and Anganwadi Centre</b>	Improved quality PHF and primary school	High school (distant) Hospital (distant)	Improved quality of primary school	Hospital (distant)	Improved quality of primary school	Hospital (distant)
<b>Veterinary Service</b>	Good quality of veterinary service	Not mentioned	Good quality of veterinary service	Veterinary service (distant)	Not mentioned	Consumer society

**Table 5.3.2c Perceived service access according to socio-economic categories: Chunchanagahalli**

	<i>Categories of service recipients</i>			
	<i>APL (Big owners)</i>		<i>BPL (Small owners)</i>	
<u>Services</u>	<i>Service quality</i>	<i>Services Needed/changes</i>	<i>Service quality</i>	<i>Services needed/changes</i>
<u>Water supply</u> ( <i>IRR: pumpsets</i> <i>DW: minor tanks</i> )	<i>DW: Good quality but no public/private taps.</i> <i>IRR: dependent on electricity</i>	Major tanks for public/private water taps	<i>DW: Good quality but no public/private taps (only minor tanks).</i> <i>IRR: dependent on electricity, on no. of pump set available and on cash at disposal.</i>	Major tanks for public/private water taps
<u>Infrastructure</u>	Low development of <i>road and transportation</i> system. <i>Drainage: limited village coverage and no proper construction</i>	Expansion and improvement road system, closer bus stand, increased number of buses	Low development of <i>road and transportation</i> system. <i>Drainage: limited village coverage and no proper construction.</i>	Expansion of road network, closer bus stand, increased number of buses
<u>Housing Facilities</u>	Satisfied	Improved housing conditions	Difficult to get access to GP housing schemes, especially for illiterate people	Proper housing conditions
<u>Milk Diary Collection Point</u>	Good: distance and prices	Consumer society within the village	Good: distance and prices	Consumer society within the village
<u>Electricity</u>	Few hours per day, many power cuts.	Street lights	Few hours per day, many power cuts.	Street lights, electricity in houses
<u>Primary School PHFs and Anganwari centre</u>	New school building (UNICEF)	Higher school PHFs and veterinary services	New school building (UNICEF)	Higher school PHCs and veterinary services
<u>Credit (by FFIs)</u>	Not mentioned	Credit facilities (banks, post office closer)	Scarce access	Not mentioned
<u>V.S.S.B.N.</u>	Low access	No proper inputs facilities received by the V.S.S.B.N.	Not mentioned	Not mentioned

Source: Primary data collected during the field research

As the two tables show, rural service delivery is perceived differently both between and within the two villages. In Shinghatagere, all the categories appear to be satisfied with water supply facilities, such as drinking water and irrigation, and with infrastructure, such as roads and transportation. All the interviewed observed in the past fifteen years an enormous improvement in access and quality of such services. An overall positive judgement from all the group-categories regards also the services that the agricultural cooperative society (V.S.S.B.N.) is providing, such as crop loans and agricultural inputs. The same happens with the services provided from the milk cooperative. The only concern regards the distance women have to cover to reach the milk dairy. Formal credit delivery differs in terms of access and quality (amount-wise) among richer and poorer farmers. APL farmers demand for an expansion in the amount of the loans they are receiving to undertake productive investments. By contrast, BPL farmers are still lacking an effective and on-time linkage to formal financial markets and demand for an increase in accessibility.

Chunchanagahalli shows sharper contrasting perspectives among wealth categories in terms of service access and quality. Access to irrigation facilities is more constrained for small and marginal farmers. Both categories face the problem of scarce power availability that reduces the extent to which pump sets can be utilised to irrigate fields. Moreover, poorer farmers have to deal with the problem of pump sets availability and limited money available to pay the hourly rent. Infrastructural services are perceived by all the interviewed people as very poor. In Chunchanagahalli, improving the housing condition is still a major priority. Among poorest people, most of them illiterate, GP housing schemes are perceived not easily accessible, due to complicated bureaucratic procedures required. Saving and credit facilities and distribution of inputs by the agricultural cooperative society are not equally accessed by all. Even though particularly BPL farmers are lacking proper access to credit and inputs, only better-off farmers explicitly mentioned the need for increased access to those services to be able to embark on productive investments. In fact, in vulnerable situations of risk and uncertainty, in which small and marginal farmers are embedded, priorities seem to lie somewhere else, for example in getting a regular income, proper housing conditions and electricity. Their permanent vulnerability limits their capacity to act and think to the long-term.

## ***5.4 Agricultural finance, input and output markets: status quo***

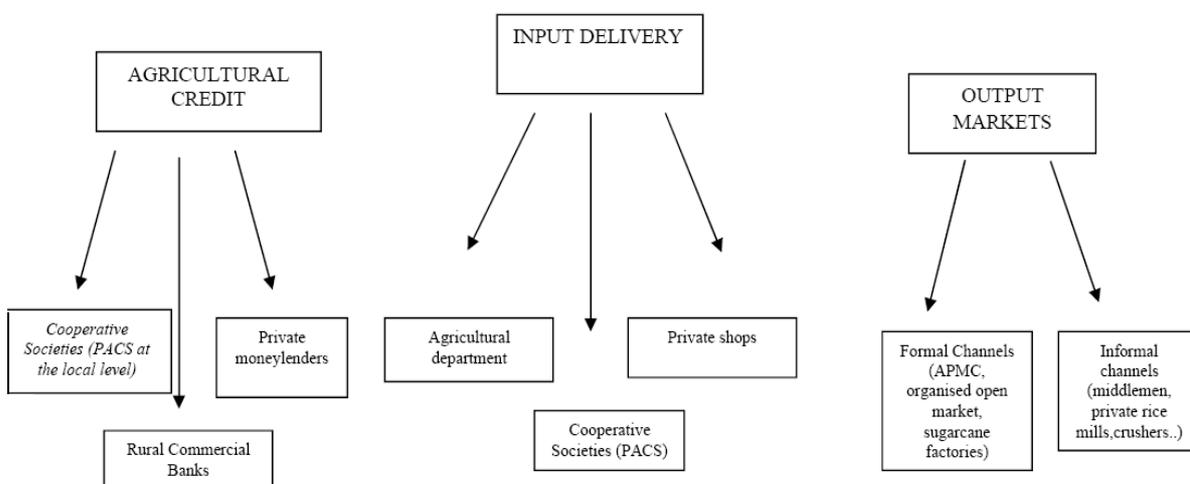
Having access to on-time and reliable financial and input markets and profitable output markets has been identified as highly influential to achieve effective input demand and surplus production, as discussed in sections 2.1 and 5.3. The institutional scenario which is characterising those markets, potentialities and challenges service providers are facing and to what extent service recipients are benefiting from pro-poor and effective service delivery are some of the issues that are now going to be tackled.

### *5.4.1 Who is providing services in agricultural finance, input and output markets?*

A bottom-up approach has been used to indentify the actors providing goods and services in financial, input and output markets. Although differences in access and quality of services provided, the range of formal and informal actors is the same in the two villages.

At the village level, three main actors are providing credit and other financial services: formal financial institutions (FFIs), such as Rural and Commercial Banks (RCBs) and the agricultural cooperative society (V.S.S.B.N.), and informal ones, such as private lenders. Agents responsible for the provision of inputs (seeds, fertilisers, salt and pesticides) are the agricultural department, the agricultural cooperative society and private shops. Output markets are also dominated by both formal and informal agents. Marketing channels vary according to the type of crop. Products such as tender coconut and cocoons are sold in organised markets and sugarcane in factories (both formal institutions, state regulated); paddy and ragi and part of the surplus of sugarcane are marketed through informal channels, such as the middleman, private rice-mills and crushers. Figure 5.4.1 provides an institutional map of formal and informal agents acting in financial, input and output markets.

**Figure 5.4.1a: Institutional mapping of the market-related services arena**



Source: own design

The provision of infrastructural facilities, such as roads and transportation, are responsibility of local governance units – particularly the GP -, that in collaboration with specialised line agencies such as the Child and Women Department for social services and the Engineering Department for infrastructural services, should ensure effective and targeted service delivery. What follows is going to provide a more detailed overview on three formal actors delivering market-related service<sup>69</sup>.

*Financial market: Vyvasaya Seva Sahakara Bank Niyamila (V.S.S.B.N), the agricultural cooperative society*

Mandya district counts 229 cooperative society branches; 52 are present only in Maddur taluk. At the present, one of the main objectives of the cooperative society is to provide cheap and easy crop loans and other financial services to farmers. Such facilities have recently been introduced in the cooperative system and allow farmers to get all the services required for production purposes in the same location.

<sup>69</sup> Data and information contained in this section derive from secondary data and interviews with stakeholders, namely Mr. Dewegowda and Mr. Sivanna (manager and president of the V.S.S.B.N. in Madarahalli GP), Mr. Hanumanthappa (manager of the V.S.S.B.N. in Bellur GP), Mr. Madhaswamy (assistant director of the agricultural department in Maddur taluk) and Mr. Y.P. Timappa (assistant secretary of the APMC in Mandhya district).

**Table 5.4.1: Main characteristics of the two V.S.S.B.N.s**

	<i>Distance (Km)</i>	<i>Members (SC)</i>	<i>Covered villages</i>	<i>Main services provided</i>
<i>Shinghatagere (Madarahalli GP)</i>	<b>1</b>	<b>1014 (200)</b>	<b>5 (1 GP)</b>	-Agr. Loan and other financial services - <i>Seeds and fertilisers</i> - Insurance schemes (health and farmer accident)
<i>Chunchanagahalli (Bellur GP)</i>	<b>3</b>	<b>240 (16)</b>	<b>15 (2 GP)</b>	-Agr. Loan and other financial services -Insurance schemes (health and farmer accident)

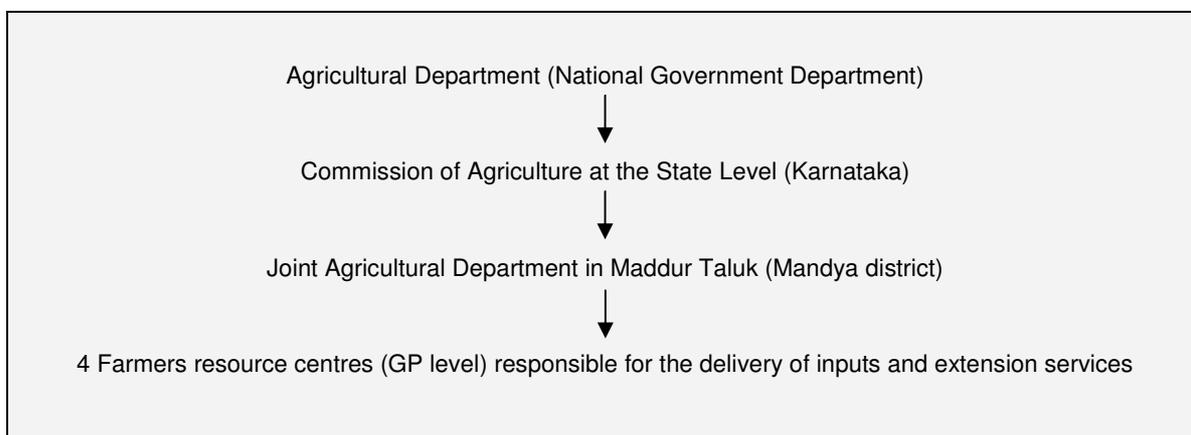
Major features of the two agricultural cooperative societies are presented in table 5.4.1. The two societies present similar characteristics and provide similar services to their members. Each branch has a board of members formed by 9 people, the large majority elected by the shareholders (8 are elected by members and 1 by the District Cooperative Central Bank). The NABARD is the apex organisation providing funds to the local branches through the District Cooperative Bank (see section 2.4.3). Through the financial support of NABARD and the state government, the cooperative society is able to offer agricultural loans at a lower interest rate of 4 percent<sup>70</sup> (per annum) compared to the 12 percent offered by the commercial banks. Other financial facilities provided include property loans (12 percent interest rate p.a.), savings facilities (18 percent interest rate p.a.) and sericultural loans to start up the activity (up to 2 lakhs). Among other services that can help farmers to spur their agricultural productivity, the agricultural cooperative society (only in Shinghatagere) provides seeds and fertilisers at market rate. Insurance schemes, such as health or farmer insurance are additional services members can get access to. Pre-requisites to become a member of the cooperative and benefit from agricultural loan facilities are a farmer status, a minimum of ¼ of land, the RTC card (containing information on assets and properties of the farmer; farmers can receive it through the revenue department) and the payment of a membership fee (120 Rs.) once in a while. The amount of the loan is decided from the District Cooperative Bank and varies according to the size of the land (presently it 20000 Rs. per acre), to the crop cultivated and from year to year (see annexes). The experience with cooperative lending of those two braches has been very successful (100 percent recovery rates registered). The number of agricultural loans has increased in quantity and amount-wise. Still, funding problems limit the action and efficacy of such network of institutions.

<sup>70</sup> The difference is covered by the state through the district bank (6 percent) and the remaining 2 percent directly by the central government

### *Input market: the Agricultural Department*

Regional branches of the agricultural department are among the major providers of inputs to small and marginal farmers (up to 5 acres of land), who constitute the 99 percent of their clients. Food grains are distributed on subsidies up to 75 percent for paddy and ragi. Such seeds are supplied by the Karnataka State Seed Corporation, a national seed corporation. Pesticides and other equipments are also delivered on subsidies (50 percent) together with full-cost fertilisers and bio-fertilisers. The agricultural department delivers inputs only in the Kharif (winter) season; outside this period farmers have to rely on private dealers, who provide inputs at full price (no subsidy). However, quality and price of private shops (and also of the agricultural cooperative) are supposed to be controlled by the agricultural department. The agricultural department supplies a range of other facilities to small and marginal farmers, such as exposure visits and trainings on new technologies or new crop varieties and loans for agricultural equipments (such as tractors and pump sets). Also, SC/ST people can have access to free inputs and agricultural equipments once selected by the TP or by the local resource centres. The funding sources for the agricultural department services are provided by the central government (75 percent) and by the state government (25 percent). The agricultural department apparatus has the following structure:

**Figure 5.4.1b: Decentralised structure of the agricultural department**



The resource centres (holies) have observed a remarkable increase in the demand for inputs in the past years. They are 4 and cover 42 GPs within the taluk. However, smallholder farmers still heavily rely on the private sector.

### *Output market: the Agricultural Produce Market Committee (APMC)*

The APMC is a commodity board where farmers can sell their products. It is intended to be a sound and reliable alternative to the middleman, the traditional marketing channel used by

small and marginal farmers. Offering proper marketing facilities and reasonable prices are the two major objectives of this commodity board. Even when prices are falling, a minimum price for the product is ensured. Generally tender, action or mutual agreements are the marketing rules in place. In the Maddur APMC, established in 1992 and mostly dealing with the marketing of tender coconuts, the prevailing form is the mutual agreement between buyers (wholesalers, middleman, brokers, exporters..) and sellers. The price is decided according to the season, size and quality of the tender coconut and can vary between 3-9 Rs per piece. The seller has the power to choose the best price that different buyers are offering. Once the farmer has chosen the best deal, the handling goes on in the market, where the price for each coconut is accorded between buyer and seller, through mutual agreement. The funding of such marketing agency depends on the agricultural marketing department and on the amount of marketed products; for each tender coconut sold 1,5 percent goes to the APMC. A tuition fee of 200 Rs. is also collected from the farmers.

Up to 3 lakhs tender coconut are sold daily from farmers to buyers without middleman intermediation; although originally intended to cover two blocks (Maddur and Malavalli), its popularity among farmers extends well beyond such areas, and farmers from other districts and even neighbouring states are crowding this market place. Moreover, beside marketing facilities, the Maddur APMC offers banking and storage facilities to farmers. Other agricultural markets offer also loan schemes, such as the pledge loan scheme<sup>71</sup>, which is a short-time loan scheme of 90 days. Within this scheme loans up to 50000 Rs. or 60 percent of the value of their agricultural products might be lent to farmers against the pledge of their marketed crops. The scheme is applicable only with non-perishable goods (thus not offered in the Maddur APMC), such as paddy and ragi, which can be stored and kept as 'collateral'.

The Maddur APMC has turned out to be a reliable alternative to the middleman for farmers willing to sell their tender coconuts, and has registered an increase both in the number of farmers using this facility and in the marketed amount of products sold.

#### *5.4.2 Potentialities and constraints in formal and informal service delivery*

In order to analyse how formal and informal actors are delivering services, the following section is going to discuss some of their potentialities and constrains. Which are the problems encountered by service providers in the delivery of the services, which are risks and costs

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<sup>71</sup> [http://maratavahini.kar.nic.in/apmc\\_eng/e\\_schemes.htm](http://maratavahini.kar.nic.in/apmc_eng/e_schemes.htm).

faced by farmers in accessing those services, and what actually leads farmers to choose for one or the other source are some of the issues that are going to be analysed.

#### Credit delivery

The main difficulty the formal sector seems to face in the rural context taken into consideration is the problem of (on-time) availability of the service. In financial, input and output markets, formal institutions are usually providing best quality of services, e.g. loans with lower interest rates and secure contracts, high quality inputs at low prices and regulated output markets that offer farmers larger profit margins. However, the accessibility to such services is very often constrained. For instance, although the GoI has made many efforts to expand the outreach of formal credit, still a large number of people does not benefit from it. Lack of collaterals, transaction costs, complicated procedures to get access to formal credit have excluded (or discouraged) large sections of poor people from traditional financial markets. Moreover, FFIs normally do not lend other money if the precedent loan has not been repaid. That leaves farmers that are not able to recover the outstanding loan without other choice than recurring to private lenders to cover seasonal cash needs.

#### Input Delivery

Formal actors responsible for the provision of inputs such as the agricultural department and the agricultural cooperative society do face the problem of scarce availability of resources. The large majority of the interviewed farmers agreed that such agencies are providing the best inputs, in terms of quality and affordability of the prices (the agricultural department delivers inputs on subsidy for the first crop). However, due to stock deficiencies or lack of seasonal credit to buy inputs at the time of delivery, small farmers often cannot benefit from input delivery by formal sources. Although more expensive and of deteriorated quality<sup>72</sup>, often the only solution for farmers remains to buy inputs from private shops.

#### Market access

On output markets, the major problems faced by farmers are high price instability and high transaction and transportation costs to get access to formal markets. The absence of appropriate infrastructure and institutions to market food crops is a major market failure (Smith, 2001). Effective and reliable output markets imply appropriate marketing facilities that allow remunerative and stable prices for farmers' agricultural produce. As previously mentioned, the main crops cultivated in Mandya are paddy, ragi, sugarcane, tender coconut and mulberry leaves. Among those crops, surpluses of paddy and ragi are mostly sold through

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<sup>72</sup> In Chunchanagahalli private shops have even a larger share in the input market, since the agricultural cooperative society does not deliver inputs.

the middleman. The middleman results to be the most efficient choice for farmers who behave rationally but act in a constrained environment. As explained in section 2.5, the use of the middleman helps to avoid transportation and transaction costs that, for small output quantities, would outweigh the profits coming from higher prices received on the market. In conditions of small surplus quantities, low cash liquidity and high opportunity costs to get access to markets, the middleman turns out to be the preferred marketing channel. Other reasons for the choice of informal marketing channels are that the payments occur in spot cash and the farmer has the possibility to get seeds and fertilisers on credit. Sugarcane, tender coconut and mulberry leaves are mostly sold through formal marketing systems. In both villages, sugarcane is normally sold to the closest sugarcane factory. There, prices are decided by the government, and are yearly revised. The marketing of agricultural commodities under state regulations, especially for commercial crops, has a long history; various acts were established in different regions of Karnataka starting from the 1927<sup>73</sup>; this is one of the reasons that led to the regional diversity in the marketing systems in Karnataka (Deshpande and Raveendra Naiva, 2004: 18)<sup>74</sup>. Lack of proper infrastructure has been argued as one of the main reasons that limits the effective provision of formal marketing systems, e.g. lack of density and coverage of markets (Deshpande, Dogra and Gajarajan, 1993; Deshpande and Raju, 2001).

To sum up, not surprisingly, formal providers appear to be potentially the most successful to respond to the demand for improved services. Their proper functioning creates an enabling environment that stimulates sustainable agricultural growth. Examples have been presented in section 5.4.1; the V.S.S.B.N. can provide easy, cheap and regulated access to credit, the farmers' resource centres delivers good quality inputs at subsidised interest rates, and the APMC for tender coconut offers remunerative prices that allow farmers to make higher profits. Still, service providers in the formal sector face major constraints and thus institutional reforms are required to increase their capacity to deliver services.

#### *5.4.3 What is working, where and why in the provision of market-related services?*

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<sup>73</sup> Few years later the Madras Commercial Crops Act governed the regulation of markets in South India.

<sup>74</sup> In 1966, the revised Karnataka Agricultural Produce and Marketing merged together all the past acts. Such act was explicitly aimed at improving access to formal marketing systems and alleviate their dependency on the middleman. According to this act, once a commodity was designed to a specific market in the area, commodities produced in that area had to be sold only in those markets (Deshpande and Raveendra Naiva, 2004: 18). Karnataka now has 140 main markets and 333 sub-markets (Government of India, 2001a). Still, the density of the markets and their coverage is rather inadequate to substitute what so far, and still nowadays, has been efficiently handled by informal marketing systems.

This section tries to deepen the analysis on the market-related service delivery in the two villages and explores the dissimilar service perception felt from various socio-economic categories of people. Understanding which services are working, where and why might facilitate the answer to the question: what limits/contributes to the effective provision of services in financial, input and output markets?

The three markets will be considered separately. One of the scopes of the interviews conducted with service recipients during the field work was to become acquainted with the access to financial services, input delivery and marketing facilities by different socio-economic categories. As far as financial services are concerned, the survey has tried to include also the most vulnerable social categories such as OBC and SC families<sup>75</sup>. However, information on their access to market-related services is constrained both because of the low number of interviews and from the fact that they are often not involved in agricultural production (if they are, they are mostly labourers); particularly, they have not been found able to answer to questions on access to input and output markets. The following tables (5.4.3a, b and c) present information according to different socio-economic categories and display data in percentages. This allows to make considerations on the effectiveness of market-service delivery within and between the villages.

### *Financial market*

Starting from access to credit, the table 5.4.3a considers the percentage of households who do have taken loan and the source of the loan; this can be formal, from FFIs and SHGs, informal, from private lenders, or both. If the number of households that have taken a loan is considered, it can be observed that rural people in Shinghatagere have better access to such service: the percentage of total households in Shinghatagere who affirmed to have taken a loan is 95.83 percent against the 79.17 percent in Chunchanagahalli. In both villages, a large number of APL farmers do have access to credit facilities (100 percent in S. and 87.50 percent in C.), compared to a lower, although still large, number of BPL farmers (83.33 percent in S. and 73.33 percent in C.). In S., even the most vulnerable social categories interviewed such as the OBC and SC have access to credit, while in C. the OBC interviewed households benefited from a very limited access. The table reveals also that in S. there is a higher percentage of villagers having access to formal sources of credit, both overall (87.50 percent against the

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<sup>75</sup> As a reminder: 2 and 3 are the OBC families interviewed in S. and C.; just 1 SC member has been interviewed in Shinghatagere.

50.00 percent in C.) and in each socio-economic category<sup>76</sup>. This difference between the two villages is even wider considering poorer farmers and OBCs (e.g. the 83.33 percent out of the total BPL farmers in S. against the 40.00 percent BPL farmers in C. benefits from the access to formal credit).

**Table 5.4.3a Access to credit according to socio-economic status  
(percentages of farmers in each category)**

Farmer categories per socio-economic status	Households Taken loan	Source of the loan		
		Formal*	Informal**	Both sources
APL	100.0	100.0	9.09	9.09
APL_BPL	100.0	71.43	57.14	28.57
BPL***	83.33	83.33	16.67	16.67
OBC	100.0	100.0	0	0
SC	100.0	100.0	100.00	100.0
<b>Shinghatagere total</b>	<b>95.83</b>	<b>87.50</b>	<b>25.00</b>	<b>16.67</b>
APL	87.50	62.50	37.50	37.50
BPL***	73.33	40.00	26.67	13.33
OBC	33.33	33.33	0	0
<b>Chunchanagahalli total</b>	<b>79.17</b>	<b>50.00</b>	<b>29.17</b>	<b>20.83</b>

\* Formal Sources: Banks, Agricultural Cooperative Society and SHG. The percentage shows the number of people who have access to at least one of these formal sources of credit.

\*\* Informal Sources: Private lenders

\*\*\* BPL: This category includes also OBC and SC members

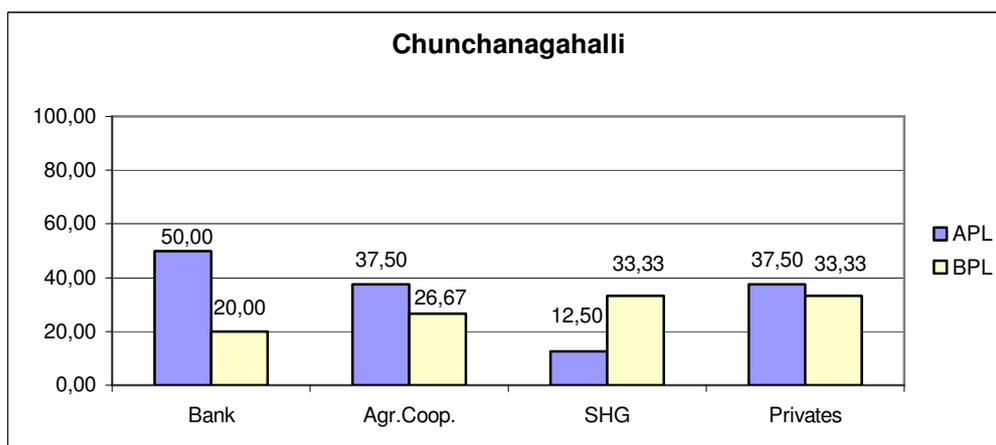
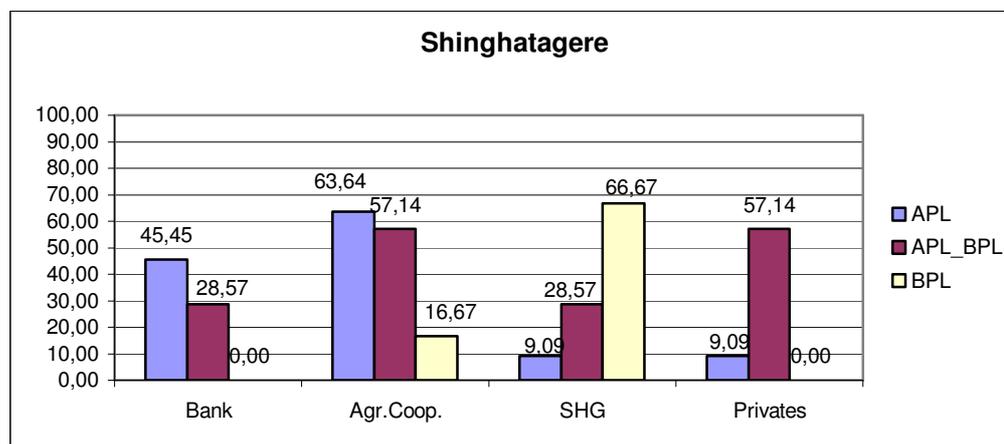
Source format: Sekher et al. 2007, adapted. Primary data used.

The percentage of the interviewed people in both villages that have taken a loan from private lenders is very similar, the 25.00 percent in S. and 29.17 percent in C.. That testifies the fact that a relative large number of people still rely on the informal sector, even in the relatively more developed village. This is mostly due the easier availability of informal sources of credit; as mentioned in previous sections, farmers need easy and frequent (often in small quantities) access to credit to fulfil their household's and productive requirements. Private lenders can offer it, although at more expensive and unregulated conditions.

<sup>76</sup> It has to be mentioned that such figures are relatively high because SHG lending has been considered as a formal way of lending, although community-based. A high number of women interviewed was member of SHGs and had access to SHG credit facilities. This of course raised the percentage of access to formal sources.

In S. loans are mostly used for agricultural purposes (17 people), to buy animals (4), to start-up new IGAs such as sericulture or for other private purposes. Also in C. agriculture represents the main priority credit is asked for, together with household's subsistence.

**Figure 5.4.3a: Formal and informal sources of access to credit per socio-economic category**



Source: Primary data collected during the field research

Figure 5.4.3a summarises where the interviewed community has access to credit from. Looking first at the differences encountered within the socio-economic categories of a single village, it can be observed that in Shinghatagere APL farmers are those who are having wider access to formal credit institutions such as banks and the agricultural cooperative society. The other actors within the financial market, SHG and private lenders, do play a more marginal role for APLs. The other relative better-off category in the village, farmers belonging to the APL\_BPL category, does get access to credit facilities mostly through the agricultural cooperative and private lenders. The interviewed people belonging to the BPL category

strongly rely on SHGs lending<sup>77</sup> and in a smaller number on the agricultural cooperative credit. In Chunchanagahalli such disparities in the credit sources among various socio-economic categories is less evident. Here as well, better-off farmers have greater access to bank facilities compared to poorer people. The agricultural cooperative and private lenders are together the second most common source of credit (37.50 percent). As far as the BPL category of people is concerned, they still mostly rely on SHG and informal sources of credit.

Briefly comparing the two villages, according to the socio-economic categories, it has been mentioned that better-off farmers in S. are the principal beneficiaries of formal credit sources such as bank and agricultural cooperative facilities. Especially the V.S.S.B.N. assumes a crucial role for the relatively better-off farmers (APL and APL\_BPL people). In C., better-off farmers do have access to different credit agencies in a relatively equal way (although bank credit still counts for a wider percentage, 50 percent). Moreover, although the percentage of APL people having access to bank facilities in the two villages is very similar (the 45.45 percent in S. and 50.00 in C.), in C. less people benefit from the agricultural cooperative credit facilities. Also, in S., SHGs seem to be a more reliable source of credit for women of the village, given the higher percentage of members benefiting from the group credit and saving facilities (the 66.67 percent in S. compared to the 33.33 percent in C.).

From what has been said so far, some hypothesis can be formulated on what works, where and why in the provision of financial services:

- (1) *Access to bank credit facilities mostly works with better-off categories (APL and APL\_BPL) in both villages. External factors might influence this outcome. More assets available, in terms of capital, property, size of the land and diversified livelihood activities constitute collaterals and make easier for those people to benefit from formal bank-lending. Moreover, higher literacy levels foster their confidence in completing the formal procedures required to have access to bank credit. Lower transaction costs and opportunity costs are involved given the larger volumes of credit.*
- (2) *Services offered from the agricultural cooperative are mostly used by better-off categories (APL and APL\_BPL). Easy access due to the relatively short distance to the village, low interest rates and the fact that in the same place farmers can buy also inputs make the V.S.S.B.N. attractive, and in the case of S. more attractive than bank credit. In C. credit services from the agricultural cooperative society reach a lower number of people.*

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<sup>77</sup> N.B.:5 out of the 6 BPL interviewed people are women.

- (3) SHG lending is mostly accessed by poor women. The arguments illustrated in the literature review (section 2.4), on the reasons that make group lending so appealing for poor and often marginalised people, are valid in the micro-reality observed: e.g. short distance (SHGs are usually placed within the village), no collaterals needed, trust and joint liability that reduce transaction costs. Credit in most of the cases than is not used for proper agricultural purposes (e.g. buy seeds and fertilisers) but rather for marriages or to buy livestock.
- (4) The informal sector still plays a significant role, particularly in C. and for the APL\_BPL category in S.. One of the reasons is that in C. formal agencies providing financial services seem to be relatively less effective in reaching the potential service recipients. However, a relatively large number of people in the APL\_BPL category in S. still uses informal sources of credit; it can be assumed that such category is composed from people that are now increasing their production possibilities and thus they are in need of more credit at disposal; private lenders are then the easiest way to fulfil their credit requirements.

### *Input market*

In the next two sections, dealing with input and output markets, the attention is going to be paid exclusively on farmers. Table 5.4.3b shows how big, small and marginal farmers are having access to input markets.

**Table 5.4.3b: Where do farmers get access to inputs? Data displayed according to the socio-economic status (percentages of farmers in each category)**

	Source of input			
	Agricultural Department	V.S.S.B.N.	Private shops	Only private shops
APL	45.45	63.64	45.45	9.09
APL_BPL	42.86	0	85.71	42.86
BPL*	16.67	16.67	33.33	16.67
<b>Shinghatagere total</b>	<b>37.50</b>	<b>33.33</b>	<b>37.50</b>	<b>20.83</b>
APL	62.50	50.00	87.50	37.50
BPL*	46.67	0	73.33	26.67
<b>Chunchanagahalli total</b>	<b>50.00</b>	<b>16.67</b>	<b>78.26</b>	<b>30.43</b>

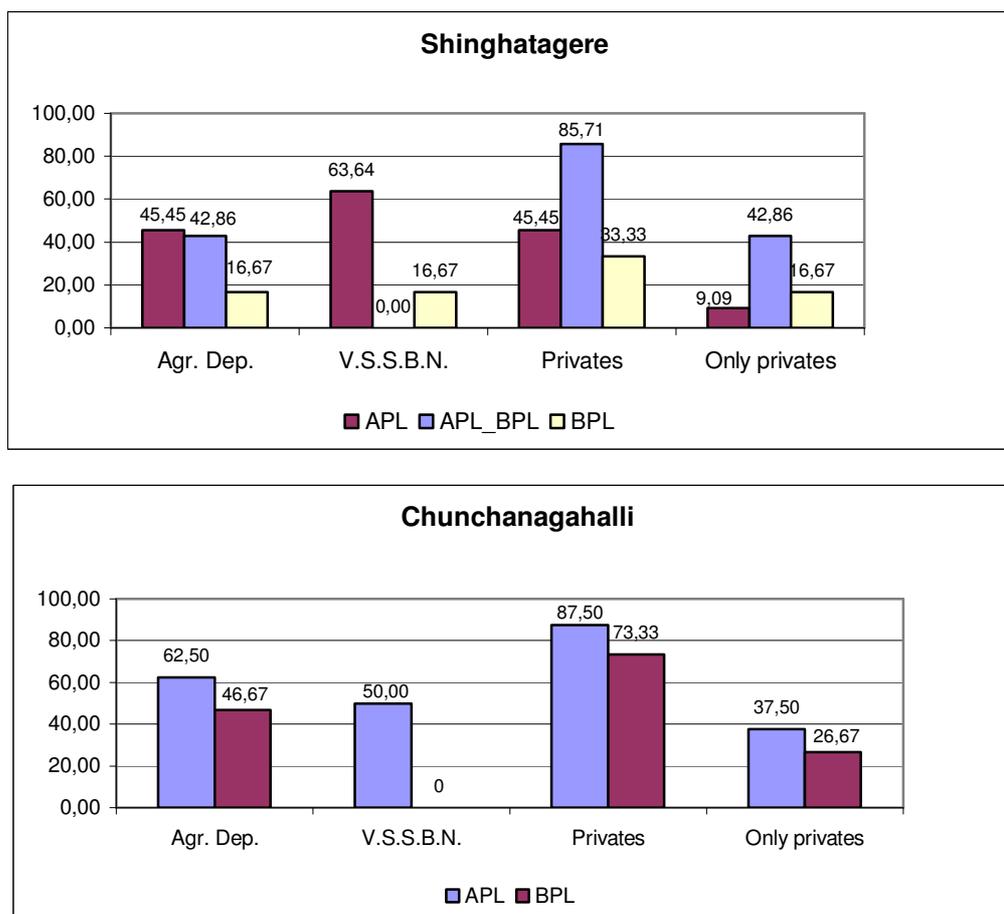
\* BPL: This category includes also OBC and SC members.

Source: primary data

As previously mentioned, there are three main actors providing inputs. Most of the farmers in both villages usually purchase seeds and fertilisers from different sources at the same time. However, in some of the cases, inputs requirements are fulfilled only by private shops, especially when other input providers lack sufficient and on-time stock.

In S., those who have access to inputs provided by the agricultural department are in majority belonging to the better-off categories (45.45 percent APL and 42.86 percent APL\_BPL against the 16.67 per cent for BPL). APL farmers are also those who are benefiting most from inputs offered by the V.S.S.B.N (63.64 percent). Private shops are a major source for input delivery for them when the stock at the agricultural department and at the cooperative society is not sufficient or not available (45.45 percent APL and 85.71 percent APL\_BPL farmers are purchasing inputs also from private shops). A marginal percentage of APL farmers (9.09 percent) uses only private dealers. By contrast, people belonging to the BPL category do make use of inputs to a much lesser extent.

**Figure 5.4.3b: Where do farmers get access to inputs? Data displayed according to the socio-economic status (percentage of farmers in each category)**



Source: Primary data collected during the field research

Data are graphically displayed in figure 5.4.3b. In C., private dealers play an even larger role, fulfilling large quantities of the inputs requirements from both richer and poorer categories of farmers (87.50 percent of the APL and 73.33 percent of the BPL people). However, those who make exclusively use of private sources are a minor percentage (37.59 percent of the total APL and 26.57 percent of the BPL). The agricultural department provides inputs to a majority of farmers in both categories. The cooperative society has a limited outreach, and serves only the better-off farmers.

The interviews with stakeholders revealed that access to inputs from private dealers was much easier than from formal sources such as the agricultural department and the agricultural cooperative society. The agricultural department is normally providing seeds and fertilisers only for the first crop (it is necessary to show the RTC), while the cooperative has a limited amount of stock which is given on first come first served basis. That implies that mostly better-off farmers, who have sufficient cash-availability at the time of input distribution, manage to benefit from cheaper and better quality inputs that are distributed from such formal agents. Poorer farmers, who often lack on-time credit, are forced to opt for privates, which are normally more expensive and provide lower quality inputs. Some small farmers, producing low agricultural produce quantities, also consider not worthy to require inputs from the agricultural department or cooperative because of the higher transaction costs involved<sup>78</sup>.

To sum up, what has been analysed so far could be summarised as follows:

- (1) *Higher quality inputs at cheaper rates* offered by the agricultural department and the agricultural cooperative society are *mostly accessed by better-off farmers*, who have *on-time credit availability to purchase seeds and fertilisers at the time of distribution*.
- (2) *Private dealers still play a dominant role* for all farmers because they can offer *unlimited quantities of inputs at any time*; this is especially important for *small and marginal farmers* whose input requirements are rather unpredictable. In C., private dealers even play a larger role, since the agricultural cooperative society does not distribute inputs due to storage inadequacies. Once inputs are distributed for the first crop by the agricultural department, the remaining requirements are met by privates.
- (3) As explained in section 2.5 access to good quality inputs at reasonable prices is a crucial factor that can facilitate farmers to kick-start their production; increasing productivity, higher volumes of output and economies of scale can be achieved, input and output markets are strengthened and small-farmers agricultural growth can be fostered. Targeted subsidies to kick-start markets and an increase in the outreach and

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<sup>78</sup> Transaction costs: e.g. applying for the RTC.

effectiveness of input provision from the government and the cooperative society can be a useful tool (see chapter 6).

This in short provides some evidence on what works, where and why in input provision in the two case studies analysed.

### *Output markets*

Last but not the least, farmers' linkage to functioning markets is another crucial component that can lead to small farmers' increasing profits and agricultural growth. Table 5.4.3c shows how the various economic categories of farmers are selling their agricultural produce. Firstly, what is interesting to note is that in the relatively more developed village, 75 percent of farmers are selling surpluses of paddy and ragi through the middleman, while the percentage is only the 37.50 in C.. That actually reveals that more farmers in S. manage to satisfy subsistence needs and can get further profits from marketing the surplus. In both villages, most of the better-off farmers have access to formal marketing systems; in fact, most of them are producing cash crops such as sugarcane or tender coconuts or are involved in cash activities such as sericulture.

**Table 5.4.3c: Which are the prevalent marketing channels? Data displayed according to the socio-economic status (percentage of farmers in each category)**

	Marketing system	
	Formal*	Informal**
APL	90.91	81.82
APL_BPL	42.86	100.00
BPL***	16.67	33.33
<b>Shinghatagere total</b>	<b>58.33</b>	<b>75.00</b>
APL	100.00	87.50
BPL***	46.67	13.33
<b>Chunchanagahalli total</b> ***	<b>62.50</b>	<b>37.50</b>

\* Formal marketing system: APMC market for tender coconut, factory for sericulture and open market for mulberry leaves.

\*\* Informal marketing system: middleman for crops such as paddy and ragi, crushers for sugarcane.

\*\*\* It is important to bear in mind that farmers in Chunchanagahalli produce less surplus and thus marketable crops compared to farmers living in Shinghatagere; total farmers producing marketed crops in S. are the 83.33 percent against the 56.52 percent in C.

Source: primary data

During the interviews, farmers showed distress because of lack of profits and increasing losses. In fact, given the low output prices farmers are presently getting for some crops such as sugarcane and the relatively high production costs they have to bear, production turns out

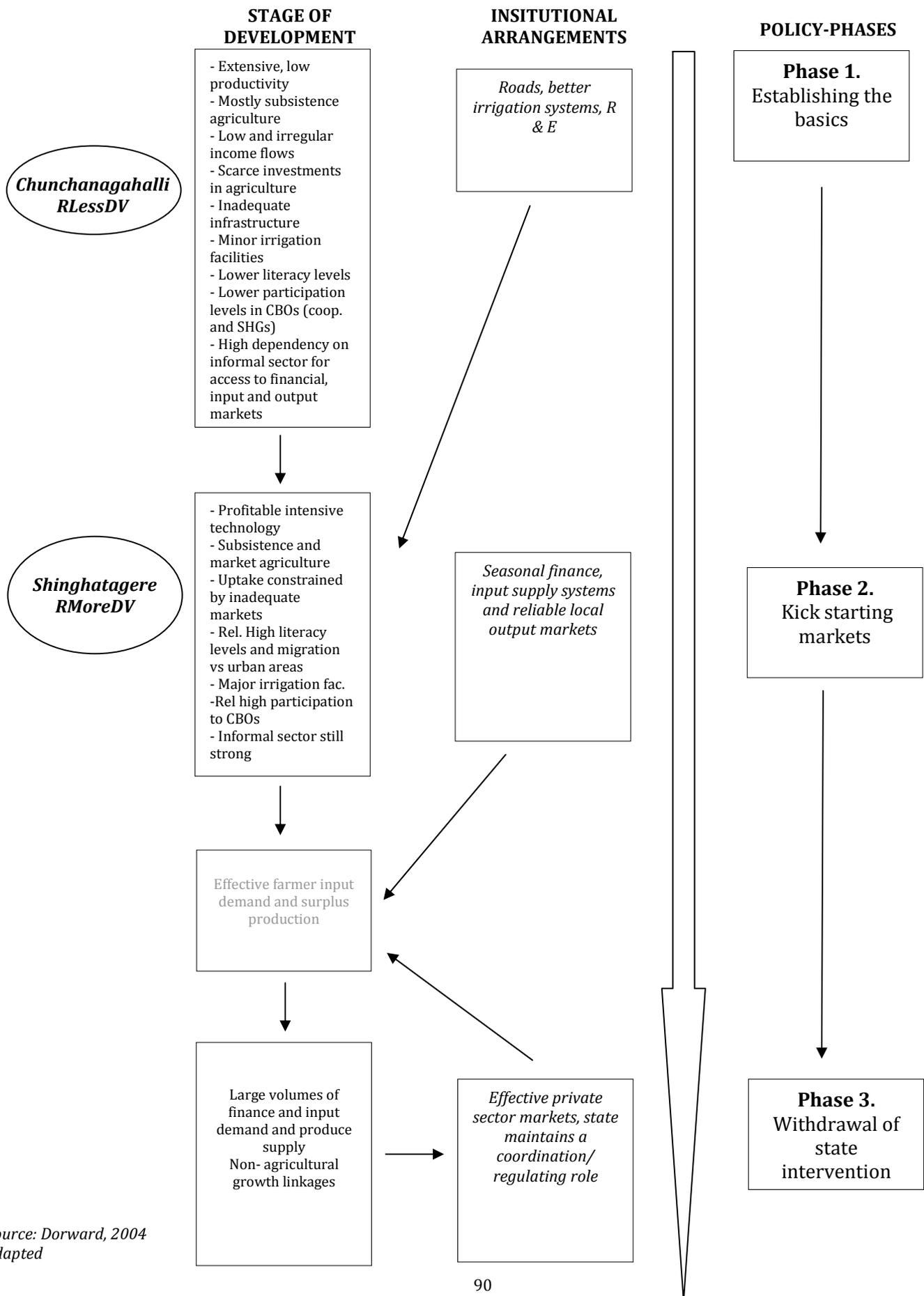
to be unproductive and inefficient. Informal marketing channels such as the middleman are dominant in both villages. The total figure in Chunchanagahalli might be misleading; as just mentioned, the lower percentage of farmers who are marketing through informal channels is due to the fact that lower surplus quantities are produced and marketed through the middleman. For the reasons explained in section 5.4.2, in a constrained environment characterised by market failures, farmers are rationally opting for informal marketing channels. On the other hand, where functioning marketing systems are present, such as the APMC in Maddur for tender coconut, those are chosen as a profitable alternative to the middleman. In both villages the APMC market is accessed by most of the interviewed people that own coconut plants; the facilities offered to tender coconut cultivators provide farmers with reliable marketing systems that can help them to increase their profits and foster their agricultural production. It has to be added that most of the information on market prices is gathered through information exchanges between farmers, newspaper, radio and television. The two villages are not so remote and that makes their connection to the outside world much easier.

To conclude, the field survey on access to output markets has revealed two major issues:

- (1) *Where functioning marketing facilities are present that ensure farmers remunerative prices, the farmers' dependency on informal intermediaries is relieved and they can increase their returns*
- (2) *In both villages, access to formal marketing systems is still weak and it is working only for few crops, such as tender coconut.*

The analysis conducted so far, on the context characterising the two communities, on their state of development and on rural service provision (with particular attention to market-related services), provides arguments to place the villages within the model described by Dorward (2004). Given local characteristics and services available to rural people, the two economies are found at different stages within the process of development and thus require different sets of policies to spur agricultural growth and reach overall rural development (see section 2.1). Referring to such model, Shinghatagere is found in the second phase of 'kick-starting markets' and Chunchanagahalli in the first phase of 'establishing the basics'. The first column in figure 5.4.3c summarises some of the major factors which have determined the level of development reached by the two villages and that have been discussed so far. At the centre are displayed the major institutional arrangements required in each phase (see chapter 6). Finally, the right column recalls the policy-phases related to the different stages of development.

Figure 5.4.3c: Villages' position within the process of agricultural transformation



Source: Dorward, 2004 adapted

## ***5.5 Concluding remarks on the analysis of data***

What has been said so far tried to describe the complex process of development with regard to rural service provision in the two villages subject of the research. Particularly, this chapter was expected to provide insights to understand:

- (1) Where the villages are placed within the path that leads to agricultural transformation and overall rural development.
- (2) Which factors belonging to the rural community and the local context have influenced the capacity to deliver/demand services effectively and efficiently.
- (3) Which are the potentials and constraints of formal and informal service delivery in financial, input and output markets.
- (4) How formal and informal agencies are performing in the provision of services they are responsible for.
- (5) How different socio-economic categories of rural service receivers perceive access and quality; or else, what has worked, where and why.

The two villages are located at different stages of agricultural and rural development. Initial conditions characterising the action arena, such as asset endowments and resources, attributes of the community and rules-in use, determine their limits and opportunities within the action situation and influence the final outcome. The relatively more developed village needs policies to effectively and efficiently kick-start markets, while the relatively less developed village still requires basic investments in infrastructure.

Empirical evidence confirms that the formal sector is able to provide better quality of services in financial, input and output markets. For instance, the V.S.S.B.N. is an attractive credit provider, because it offers credit at lower interest rates and has a large network of local branches able to cover remote areas; farmers' resource centres deliver best quality of inputs at lowest prices (on subsidy); and official markets, such as the Maddur APMC for tender coconut, are seen by farmers as a reliable and more profitable alternative to the middleman. However, financial or resource constraints, lack of sufficient infrastructure, the sometime questionable quality of those organisations and high transaction risks and costs that the rural community has to bear to get access to them, limit their outreach and effectiveness.

The provision of rural services is perceived differently according to the socio-economic characteristics of the stakeholders. Better-off farmers have wider access to formal credit sources such as banks and the agricultural cooperative society. Group lending is present in both of the villages, and it is used mostly by women, who are often excluded from the financial market. Better quality and cheaper inputs provided from formal organisations, such as farmers' resource centres and the agricultural cooperative society, are more easily accessed from better-off farmers, who have enough credit at disposal at the time of input distribution. The others, mostly the cash-deficient BPL farmers, have frequently to opt for private dealers. Farmers behave in a constrained environment characterised by poor infrastructure, high transportation costs, high transaction risks and costs, and inappropriate pricing and marketing policies that generate low levels of return. This is why for many of them, especially those having small surplus quantities, using informal marketing channels such as the middleman turns out to be a more efficient alternative to sell their crops.

To conclude, the two villages observe different levels of development together with mixed performance in terms of rural service provision. Chapter 6 is going to provide explanations behind that and suggest strategies that might favour an effective and equitable rural service provision. Finally, the role of public, private and third actors in service provision is also going to be subject of discussion.

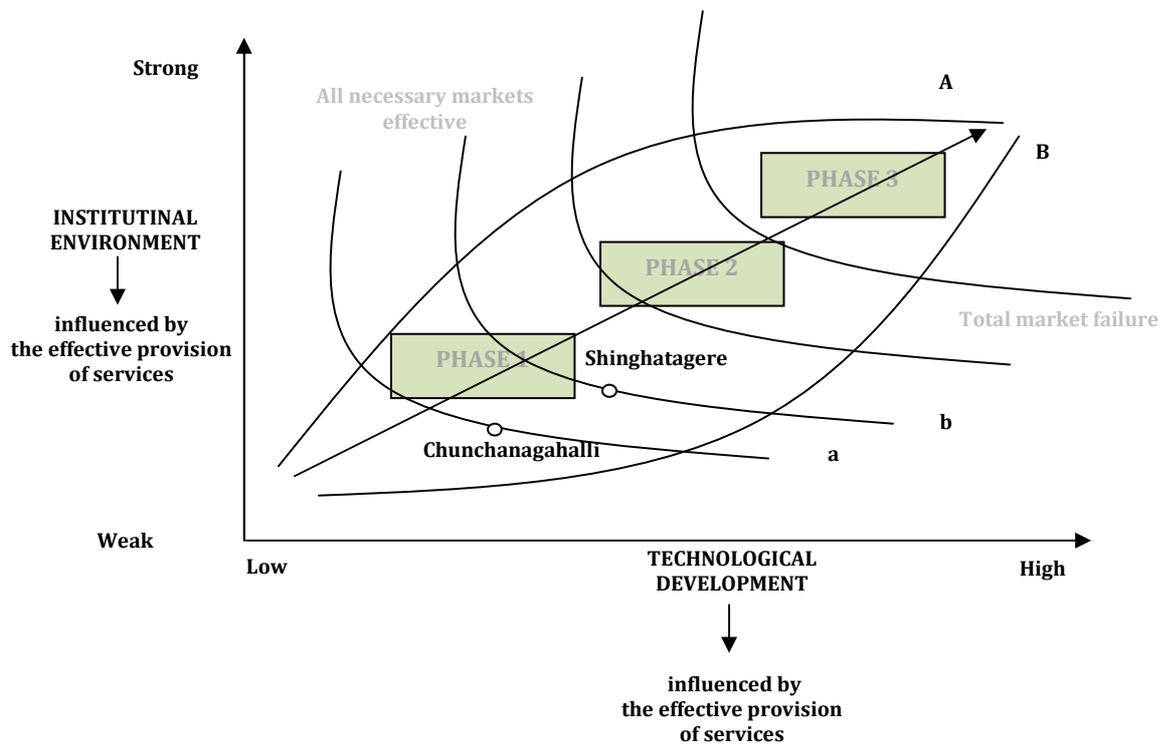
## CHAPTER 6

### -EXPLANATIONS AND POLICY SUGGESTIONS-

#### ***6. 1 What has determined the higher level of development of one village?***

One of the arguments highlighted in the literature review is that “growth linkage effects emanating from agricultural growth have proved most powerful when agricultural growth is driven by small-farms which dominate the rural economy and agriculture in most Asian and African countries” (Diao et al., 2006: 8). However, farmers in developing countries are facing enormous problems in raising agricultural productivity (Dorward et al., 2004: 78), due to major constraints caused by market failures and often inadequate efforts by the governments to create an enabling environment for such growth to occur. Some authors (Dorward et al., 2004c) who studied successful policies that favoured high productivity increases during phases of Green Revolution maintain that there are a set of conditions necessary for the rapid increase in small-holder agricultural produce. Among the most important are the introduction of high yielding agricultural technologies, such as HYVs seeds and fertilisers, secure access to natural resources such as water and land, and the existence of adequate infrastructure that enable an effective functioning of financial, input and output markets. However, beside the technological development, the institutional environment does also play a central role in favouring the process of economic growth.

**Figure 6.1: Investing in institutional environment and institutional arrangements for economic development**



Source: Dorward, Kydd, Morrison and Poulton, 2005 (adapted)

The institutional and economic development path of an economy is illustrated in figure 6.1. A set of isoquant curves are represented; the movement towards higher isoquant curves<sup>79</sup> within the depicted area (between the lines A and B) implies higher levels of technological development and improved institutional environment that leads to agricultural growth and overall rural development.

An economy which is mostly based on subsistence agriculture, such as the one characterising Chunchanagahalli, is located at the south west corner of the diagram, on the closest isoquant to the origin (isoquant a), where the institutional environment is weak and technological development is low. Quantities of surplus production that can be marketed are small and input demand is constrained. Factors illustrated in section 5.3 (figure 5.4.3c) have influenced the institutional and technological paths of the villages. Achieving higher levels of productivity is possible only by improving linkages to seasonal finance, on-time input delivery and developed output markets.

<sup>79</sup> Each isoquant represent a different level of output. On the isoquant map, the more the isoquant is distant from the origin, the higher is the level of output, in our case defined in terms of economic development which is determined by institutional and technological progress.

Shinghatagere is an economy which has already observed a shift to a higher isoquant curve (isoquant b). It has higher productivity levels, determined among other factors (see figure 5.4.3c) by profitable intensive technology used, but small farmers' uptake in production is constrained by inadequate finance, input and output markets. The rather weak institutional environment is one of the major causes that challenges the development of those markets which are critical for small-farmers' agricultural growth.

Therefore, as showed in a simplified manner in the graph, it can be argued that the two villages did perform differently within the path towards economic development. Chunchanagahalli is stuck in a condition of backwardness, with low technological development and a weak institutional environment. Shinghatagere is still constrained by a rather weak institutional environment but has managed to achieve higher levels of technological development and overall better provision of services. This condition has ultimately caused the relatively higher level of development of the village.

To lift both economies to higher isoquant curves and thus successfully move along the development path, a set of specific institutional arrangements are required (Dorward et al., 2005: 15). Policy-phases change with increasing level of development and service provision. An economy that achieves higher isoquant curves will require new policies (see figure 6.1). Some of them will be discussed in section 6.3. Before that, section 6.2 is going to deal with the relationship between rural service availability and poverty reduction, using findings derived from the quantitative and qualitative analysis.

## ***6.2 Rural service availability and poverty reduction***

One of the outcomes of the quantitative survey carried out by IFPRI resulted in the deduction of a matrix that categorises the districts according to good and bad outcomes in terms of poverty reduction and positive and negative changes in terms of service availability. The table 4.1.1a illustrates the matrix with regard to the Mandya district<sup>80</sup>.

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<sup>80</sup> The matrix includes only services for which data on the changes in service availability are available. Lack of data on drinking water and public health facilities in 1991.

**Table 6.2a: Matrix on service availability and poverty reduction, Mandya district**

	Positive change in service availability	Negative change in service availability
	<b>Mandya district, 1991-2001</b>	
<b>Large poverty reduction</b>	High School Facilities	Transportation Primary School Facilities Post Office
<b>Small poverty reduction</b>		

Source: IFPRI quantitative survey

The available data allows to suggest hypothesis on the relationship between services and poverty reduction only for some rural services provided, namely high school facilities, primary school facilities, transportation and post office. The matrix shows that the Mandya district could achieve a large poverty reduction although it observed mixed service performance; positive changes occurred only with high school facility provision.

The field survey conducted in the two villages of the Maddur taluk shows that those figures might vary within the district, and even within the same taluk. It has been argued that a set of factors has affected the level of development of the two villages. Due to incomplete or lack of data, reliable comparisons cannot be drawn according to changes in poverty levels in the two villages; therefore, those are not going to be taken as a variable of the village-matrix<sup>81</sup>. Instead, good and bad outcomes are going to be intended in terms of the relative high or low level of development.

**Table 6.2b: Matrix on service availability and level of development, Shinghatagere village**

	Positive change in service availability	Negative change in service availability
	<b>Shinghatagere, 1993-2007</b>	
<b>High level of development</b>	Drinking Water Transportation (roads, buses) Primary School Formal Credit (cooperative, banks, SHG) Input access from formal sources Veterinary services	High school facilities Linkage to output markets
<b>Low level of development</b>		

Source: Field survey

It can be expected that in Shinghatagere improvements in service availability might lead to increasing levels of development and reduction of poverty. To some extent, those effects have been observed in the field. As a result of improved rural service availability, relative large

<sup>81</sup> Data are available only for the relatively less developed village of Chunchanagahalli, and they are incomplete. Such figures show that the number of BPL people increased in the period between 1997 and 2001.

segments of the local community managed to make productive investments in agriculture or other IGAs such as sericulture, achieve technological progress, increase their output volumes and derive profits. However, the fact that some services are available does not imply that the entire local community has equal access to it (World Bank, 2001: 62). Therefore, to reach inclusive development, there is still the need to formulate strategies that make local services work for the poorest and support equity in service provision.

**Table 6.2c: Matrix on service availability and level of development, Chunchanagahalli village**

	Positive change in service availability	Negative change in service availability
	Chunchanagahalli, 1993-2007	
High level of development		
Low level of development	Drinking Water Primary School Milk cooperative society	Transportation (roads, buses) Minor irrigation facilities High school facilities Input and credit access from formal sources Linkage to output markets

Source: Field survey

By contrast, Chunchanagahalli observed only minor improvements in service provision, and this is one of the reasons that has influenced the village's scarce development and still high levels of poverty. Chunchanagahalli is stuck in a condition of backwardness, where most of the villagers are characterised by few assets, high levels of vulnerability and poverty.

To sum up, what has been said confirms the hypothesis that improved service delivery might have an impact on lifting poor economies towards higher levels of development and ultimately towards reducing poverty. The next section will move on considering which strategies might favour a better service delivery for small farmers agricultural growth in the local context studied.

## ***6.3 Policy-interventions for rural development: experience from the field***

*"...A workable strategy for acceleration of productivity in agriculture has to attack the binding constraints to agricultural productivity that requires tailoring the right mix of actions with the specific potentials of regions".*

*World Bank, 2006*

As explained in section 2.1, public-private policy interventions that push the process of development in poor rural areas should change over-time and differ spatially (Doward, 2004: 3). Some of the institutional arrangements that have been discussed in the literature review are going to be discussed with the evidence provided by the micro-reality that has been analysed.

### ***6.3.1 Impact of decentralisation***

Effects of decentralisation on effective service provision have been of mixed success in the past (World Bank, 2003). What has emerged from such experiences is that decentralisation cannot be conceived as a panacea for improving service delivery: positive or negative outcomes depend on how such institutional reform is implemented (World Bank, 2006: 15).

Also in the two villages, decentralisation has produced mixed results. In Shinghatagere, group discussions and individual interviews revealed that the introduction of the GP has played a significant role in improving village conditions, particularly in terms of infrastructure. Drinking water, roads, public transports, drainages, access to housing and other development programmes implemented by local governance institutions, have all remarkably improved in the last 15 years. Villagers explained that before the introduction of the GP, they had to refer to the Mandel Panchayat, a local administrative organ usually covering up to 20 villages and located at far distance. By contrast, the GP is responsible for only 5 villages and is placed at closer distance (1 and 3 Km). In Shinghatagere villagers confirmed the theoretical assumption that being GP officers closer to the people<sup>82</sup>, service providers are becoming more aware of the needs of the rural population and funds are better channelled to the right people and priorities.

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<sup>82</sup> The GP secretary has reported to be visiting the village 2-3 times per week.

By contrast, villagers in Chunchanagahalli did not express the same satisfaction with services delivered by the PRIs. Scarcities of funds and political interests have been cited as the major reasons. The village formerly belonged to another taluk and only recently joined the Bellur GP in Maddur taluk. Under the previous local administration, a lack of interest about in the village's development was reported by the service recipients. Little improvements with infrastructural services came only once the village joined the new GP. Improvements in drinking water facilities and the introduction of the milk cooperative society occurred in this period.

Considering what has been just said, one can assume that the reasons for such dissimilarities in the performance of decentralised governance institutions between the two villages might be linked to the local structures, the availability of local funds and freedom to decide how they are going to be used, political interests involved, competence of decision-makers and levels of corruption. Where the level of participation and awareness in demanding services has not increased there has usually been low satisfaction with the provided services (Birner, 2007).

As far as gender representation in local government institutions is concerned, the two villages show similar experiences. Both villages have women as presidents of the GP; Chunchanagahalli has even a female GP secretary. However, in none of the cases female representation in local government institutions has prompted significant changes for women's well-being, or at least such changes have not been perceived. This is either due to the low weight that such positions entail (the GP president position seems to play mainly a representative role), or to a lack of competency of local officers, or to both factors.

Such findings from the field confirm the argument that decentralisation is not a panacea for creating a better institutional environment and improving service provision. How it is implemented explains most of the variance on its impact<sup>83</sup>. Political interests, elite capture, corruption and lack of capacity of administrative and political functionaries are some of the factors that might have undermined a sound implementation, failing to protect the interest of the local community (Singh, 1994). How to make such local agencies effective and successful in promoting development, given the constraints in which they are acting, is not an easy question and it is surely an important terrain for further research.

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<sup>83</sup> It has also to be mentioned that decentralisation did not show to have any remarkable effects in enhancing the capacity of service recipients to demand for services. Few of the interviewed people admitted to attend Gram Sabhas (village assemblies). Also, many of them never or very rarely visited the GP office to ask for programmes or express their views.

### *6.3.2 Policy interventions in the provision of market-services*

The development of appropriate institutional arrangements assumes a central role for shifting poor economies out of a condition of underdevelopment (Dorward et al., 2005: 15). The following section is going to consider some of the strategies that might improve linkages to on-time finance and input markets and reliable output markets in the local context studied. Both villages need public-private and third sector intervention to overcome market and government failures in such markets.

#### Reforms in the credit sector

Wider cooperation between bank and cooperative lending could strengthen the effectiveness and efficiency of formal credit provision<sup>84</sup>. The NABARD (2007, p. 12) annual report affirms that the performance of cooperative credit institutions was characterised by wide variations across the Indian regions. However, due to their extensive network and the capacity to reach even the most marginal and vulnerable farmers, it results that facilitating community-based credit lending might potentially be a very beneficial tool to increase access to credit on a large scale. The experience with CBOs credit lending in Shinghatagere has in fact shown positive results; member based organisations such as the agricultural cooperative society and self-help groups have been indispensable for the provision of short-term credit and saving facilities even to the most remote sections of the community. Additional benefits of cooperative and SHG lending that have already been discussed in the literature review are also valid in this context. Moreover, in a constrained environment such as the one characterising the rural financial markets in the two villages, there is scope for targeted credit subsidies to safeguard small farmers from the high transaction risks and costs and low returns to investments they have to face. In Chunchanagahalli that should first be preceded by investments in infrastructure (e.g. roads and irrigation). Decentralised financial institutions might be the ideal agencies to identify creditworthy borrowers and ensure that subsidies are going to be pro-poor. Finally, simplifying and universalising formal lending procedures could play a significant role in stimulating poor and often illiterate farmers to make use of formal credit.

#### Supporting input delivery

In this study it has been repeatedly mentioned how important the availability of cheap and good quality inputs is for small farmers' increase in agricultural production. The Indian government has been widely known for its massive investments in agricultural subsidies,

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<sup>84</sup> For instance, common lists of credit-clients and universal passbooks showing farmers' overall credit-history in the formal sector could facilitate the targeting and monitoring of the credit delivery.

especially during and after the period of the Green Revolution<sup>85</sup>. Subsidies have steadily increased at the expense of public investments in agriculture, although they have not been equally distributed and sometime benefits have disproportionately accrued to better-off farmers (World Bank, 2006; Fan, Gulati and Thorat, 2007). As mentioned in the literature review, several studies (reference) argue that these subsidies, which were initially crucial to farmers to adopt new technologies, have resulted to be highly inefficient (Fan, Gulati and Thorat, 2007); the same studies argue also that investments in infrastructure to support agricultural growth (rural infrastructure and agricultural extension) would be a much more profitable policy option in the long run.

Short and long-term policies should be formulated to best meet all farmers' needs and foster their agricultural growth. At the initial stages of agricultural growth, such as those observed in the two village case studies, when markets are still underdeveloped, production costs per unit are high and the levels of production remain low, subsidies to kick-start the production would actually be an appropriate solution to fulfil farmers' resource deficiencies (here as well, infrastructural investments in Chunchanagahalli should come first). However, an effective targeting system, which makes sure that inputs are equally distributed, is a necessary condition for this policy instrument to succeed. Only in this way, poverty focused outcomes would be achieved and real small-farmers' growth may occur. Decentralisation might then play an important role in this targeting process. Grassroots local government institutions such as the Gram Sabhas would be an ideal candidate for performing this task, given the deep knowledge that members have about the target population and the participation of the community in the selection process. In this way, the provision of input subsidies would turn out to be community-managed, which could be a promising approach for an effective and equitable delivery of the service. One of the challenges that might be encountered refers to the widely debated problems of corruption and elite capture that decentralised systems of service provision might provoke. The possibility that better-off farmers dominate on the decision-making process is a risk that should be avoided. Once increased input and output volumes are achieved, and subsidies have used up their initial positive effects on small-farmers' agricultural production, the state should stop channelling funds in such market-intervention and should focus on long term investments in agriculture (see annexes).

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<sup>85</sup> The Indian government's budget support for fertiliser subsidies has increased more than 30 times in 24 years (from Rs. 2.6 billion in 1976 to Rs. 80 billion in 2000) and in 2000 accounted for 0.61 percent of the overall Indian GDP.

Finally, if local governance institutions play an important role for the selection of the target beneficiaries, increasing resources available to formal input providers such as the agricultural cooperative society and farmers' resource centres are complementary measures.

#### Creating working output markets

Farmers' linkage to formal markets and the assurance of remunerative prices for their agricultural produce are two of the major objectives of public/private intervention in output markets. The major problems discussed that are traditionally characterising output markets in developing countries are also present in the two villages. High transaction risks and costs and transportation costs are the reasons that prevent farmers in the two villages from having access to formal markets. The middleman results as the most profitable alternative to sell production surpluses. However, the pernicious effects of the principal-agent relationship between farmers and those informal intermediaries are known. Market failures call then state and private sector to intervene and support farmers in the marketing process. The Indian government intervened heavily in the past in minimum procurement supporting price policies that assured minimum revenues for certain crops, such as for example sugarcane. Those policies could assure price stability but over the time they have also entailed large financial costs and inefficiencies (Ninno, Dorosh and Subbharao, 2005: 6). The role of cooperatives in the marketing process, supermarket revolution and the corporate sector are emerging as some more efficient instruments that might substitute the role of the state in the market. Policy interventions should follow after a sound institutional environment is in place. The quality of government institutions does in fact play a crucial role in the success of policy interventions and, overall, in achieving economic growth.

#### *6.3 What should be the role of public/private and third sector?*

Successful delivery of services is a major challenge for governments, especially when citizens' aspirations raise with increasing incomes and development (World Bank, 2006: 7). It has been acknowledged that active state interventions have been important in stimulating growth in critical stages of agricultural market development, as the experience of the 20<sup>th</sup> century Green Revolution periods has shown (Dorward, 2004: 73). Where public service provision resulted in a failure, generating high costs (expensive minimum support price policies) and low quality of services (inefficient subsidies distribution), the state has been called to reduce its primary role in service delivery (Robinson, 2003: 1). However, in many cases, the private sector has not been incentivised to step-in the service provision, because of

pervasive market failures that undermine the profitability of investments. Liberalisation policies and structural adjustment programmes that pushed for a complete withdrawal of the state from the market left many functions once performed by the public sector unfulfilled. That brought the result that, for instance, many small farmers were left without access to key goods and services such as inputs and credit (Diao, 2006: 21). Therefore, some authors question whether new liberalisation policies can actually address problems of high transaction risks and costs that lead to market failures, and reaffirm rather the idea that state intervention is still necessary in conditions of risk and uncertainties and low density of economic activities, which characterise poor and underdeveloped markets (Dorward et al., 2004: 83). In some cases, public-private partnerships have been created; the state remains responsible for determining service standards and for financing the costs of provision, and private agencies or community based institutions remain responsible for the delivery of the service (Robinson, 2003: 2). Public, private and third sector are all expected to be involved and interact for an effective provision of services. How the different agents are going to share the task should depend on the nature of the service and the institutional context. In cases where the public sector proves to be weak and inefficient, there should be a stronger case for private and non governmental agents (World Bank 2001: 85). The New Public Management Agenda supports this idea of pluralism in service provision according to specific circumstances. Beside privatisation, private-public partnerships and contracting out of service delivery there has been an increasing scope in recent years for forms of institutional co-production<sup>86</sup>, especially in contexts where state agencies showed weak capacity of delivering services (Moore, 2004: 32).

In sum, the reality shows that there has been a tendency in the past years to reduce the predominance of the state in service provision, and rather to increase its regulating and coordinating role. However, before the government completely leaves the floor to the private sector, it has to support the development of sound institutions and create an enabling environment such that the handing over of the responsibilities is made possible (Fan, Xhang and Rao, 2004: 8). Where the absence of appropriate rural infrastructure makes investments unprofitable, public spending in rural infrastructure is hoped to generate a 'crowding-in' effect from the private sector (Timmer 2002 in Diao, 2006). In state intervention, one of the most difficult tasks the government has to perform is to understand the right time to withdraw its action and hand over the 'stick' to well-functioning market forces.

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<sup>86</sup> Institutional co-production: "long-term relationships between state agencies and organised groups of citizens" (Moore, 2004 p.32).

# CHAPTER 7

## Conclusions and Recommendations

### *7.1 From the literature review*

The first important message contained in the literature review is that agriculture-led development can lead to overall economic growth and poverty reduction. This has been shown by the experience of developing countries that achieved rapid growth in the past few decades. Many regions that went through the Green Revolution era, which spread throughout Asian and African countries, could observe a remarkable leap in productivity and in agricultural produce quantities. The second important message is that effective provision of services is one of the factors that is expected to create the necessary conditions for small farmers' agricultural growth to occur.

In the past decades, India has achieved remarkable improvements in service provision; however, both in general economic progress as in service delivery the gap between the best and worse performers is growing (World Bank, 2006: 1). There are regions such as Punjab and Haryana that enjoyed the benefits of the Green Revolution and managed to boost agricultural production; others, such as Bihar and Orissa, could only marginally realise such growth. Poverty levels normally reflect those differences in the level of development (ibid). The country has still has a long way to go to reduce such inequalities among regions but also within regions. Sufficiently available assets and resources, a sound institutional environment to stimulate investments, infrastructure, and the appropriate provision of key agricultural services together with the introduction of productivity enhancing technologies are all factors that might contribute to shift economies to higher levels of development. Institutional reforms such as decentralisation or the increased role of CBOs as alternative institutional arrangements can improve the capacity of service providers to deliver services and of service recipients to demand for services.

The theoretical part of the study concentrates in particular the attention on the model of agricultural transformation and overall rural development described by Dorward (2004), which later on finds application in the empirical part. According to this model, different stages of development afford different services and require diversified policy-phases to spur economic growth. Institutional arrangements that characterise those policy-phases need to vary according to the local context and change over time. At the initial stages of development, state intervention on basic infrastructure, such as roads and irrigation facilities and adequate access to land, are pre-requisites for further pro-growth strategies to succeed. Afterwards, policies to kick-start financial, input and output markets should be introduced to overcome market failures that hinder growth in production. The state should at the same time strengthen relevant actors responsible for service provision, so that at the time of withdrawal small-farmers are not left without key services that were state provided in the past. Facilitating the action of cooperatives and CBOs could help in achieving that aim, and make development community-driven. Once large finance, input and output volumes are created, and a sound institutional environment is in place, the state is expected to withdraw its action and start playing just a regulating and coordinating role.

The IAD framework has been applied to analyse which are the factors that influence the rural (under)development of a particular area. The action situation focuses on the provision of services, assuming that effective or ineffective pro-poor rural service provision influences the institutional environment, technological development, and ultimately the entire development process. The AID framework has been particularly useful to simplify the complex reality of the different paths of development experienced by the two villages. Final outcomes are influenced by external variables, such as local characteristics and attributes of the community, and by patterns of interaction that develop within the action situation. Those variables determine the capacity of service providers to deliver services and the ability of service recipients to demand for services, and are ultimately supposed to have an effect on the level of development of the whole economy.

In the overall process of development, market-related services are expected to play a key role for agricultural transformation. Effectiveness and equity in the provision of market-related services needs to be strengthened to make all farmers participate in such process. Seasonal access to credit, reliable input supply and linkage to profitable output markets are essential to create incentives to undertake agricultural investments. Most of the issues raised in the literature review regarding the weak status of most financial, input and output markets in rural areas of developing countries matched the reality that has been encountered in the case studies. Those markets presently face major risks and costs and need strategies to overcome

market and government failures. Formal credit opportunities remain still unavailable to the majority of poor people in rural areas. Many small farmers face difficulties in getting on-time credit to invest in agriculture. The informal sector, which provides easy but expensive and unregulated credit possibilities, still remains the preferred channel. The role of CBOs such as the agricultural cooperative and SHGs have been proved to be powerful means to expand the outreach of financial services also to the poorest and most vulnerable sections of the society. Although their performance might be challenged by the quality and availability of the so-called social capital available, there are enough successful examples to justify strategies that support them. Access to timely, good quality inputs at low price is also essential for increasing farmers' productivity. Nevertheless, due to stock or cash shortages, farmers often lack access to sufficient input quantities to fulfil their production requirements. Costs of production have substantially increased, especially with the raise of input prices such as labour and fertilisers. Instruments such as subsidies to kick-start input and output markets have been found to be beneficial short-term policies at initial stages of development, as long as they are properly targeted to the poorest and neediest farmers. Output markets are also suffering from market failures and from a dependency on the informal sector. Market intermediaries such as the middleman are rationally chosen by farmers as a second best option to sell their agricultural produce. They allow to overcome high transportation and transaction costs that farmers incur in getting access to organised markets and that, for small marketable quantities, sharply reduce their profit margins. However, this dependency is a double-edged sword, and does not represent a marketing channel that allows farmers to increase their profit margins. There is the need of building reliable and efficient markets that offer fair and remunerative prices to agricultural producers.

The study has tried to explain to what extent issues analysed in the literature reflect the reality encountered in the two villages that were the subject of the empirical research. Some of the major findings are summarised in what follows.

## ***7.2 From the empirical evidence***

The empirical part of the study has tried to identify how the two villages perform in terms of development and service provision. The study attempted to classify and discuss the two economies within the framework described by Dorward (2004), and to provide explanations on why the two villages are found at different stages of development. The less developed village, Chunchanagahalli, seems stuck in a position of backwardness, where – on top of initially unfavourable conditions - weak institutions and low technological development

causes low agricultural output quantities and low levels of overall rural development. Infrastructure is still scarcely developed and the village requires policies to 'establish the basics'. The other village, Shinghatagere, thanks to better provision of services and better initial conditions in terms of local context and municipal capacity managed to achieve relatively higher levels of development. However, uptake in production for many small farmers is constrained by weak financial, input and output markets.

The qualitative analysis contains insights on which are the factors that belong to the local community and the local context that might have influenced the capacity of service providers to deliver services and the ability of service recipients to demand services. Access to natural resources such as land and water, available irrigation facilities, levels of education and quality and availability of social capital are some of the variables that have been analysed. Those variables vary according to the socio-economic status, and the qualitative analysis has tried to show how such differences influence the opportunities and choices of individuals. A wealth-disaggregated analysis has been applied to facilitate the understanding of how services are accessed and perceived by different types of service recipients. It has clearly emerged that service priorities differed both between the two villages and within the socio-economic categories of farmers in each village. For instance, in the relatively more developed village, appropriate access to market-related services assumes the highest importance, while in the second village priorities lie somewhere else, e.g. on improving housing conditions and getting a regular income. In this way, the analysis has provided some evidence on what works, where and why in market-related service provision: who is providing better services, who has actually access to them and why that happens. The empirical research confirmed that formal providers seem to be the most capable of providing effective services. However, major constraints in terms of funds (e.g. to increase the access to loans number-wise and amount-wise), of resources (inputs availability) and infrastructure (e.g. low density of organised and integrated markets) are challenging formal rural provision of services. At the same time, partially to make-up for the gap left by formal providers, the informal sector does still play a dominant role in the two rural economies. The main reasons for that are the better availability and accessibility of services offered by the informal sector (e.g. no collaterals needed, inputs available at any time, lower transaction and transportation costs to sell the agricultural produce).

Decentralisation efforts have performed differently in the two villages. In the relatively more developed village, remarkable improvements in infrastructure have been registered after the introduction of the GP. On the other side, the rural community in Chunchanagahalli did not observe any major changes. The reality confirms what had been expected from theory:

decentralisation can be successful when it is built on existing well-functioning local structures, local governments have sufficient financial resources and can freely decide on their use, and if this institutional reform takes place in an environment characterised by good governance and low levels of corruption. Other factors such as higher literacy levels and qualifications of local officers are additional elements leading to better outcomes.

Chapter 6 investigated what has determined the higher level of development of one village. Assuming that small-farmers agricultural growth can be a powerful tool to trigger overall rural development, such growth can be achieved by means of a stronger institutional environment and higher technological development. Besides affecting each other, technological development and institutional environment are also influenced by effective service provision. Therefore, policies aimed to improve service provision might benefit also the technological development and the institutional environment, thus helping economies to move towards higher levels of development. Some more specific policy recommendations are summarised in section 7.3.1.

## ***7.3 Recommendations***

### *7.3.1 For policy-makers*

The set of causal relationships that has an impact on the outcome of the action arena is complex and diversified. There is 'no one size fits all' solution and institutional arrangements should differ according to local conditions and change over time.

In chapter 6, some approaches that proved to be successful for improving the delivery of market-related services in the two villages have been discussed. Those strategies focus on a micro-reality and therefore need further empirical evidence to allow generalisations. In the credit sector, cooperatives and member-based credit lending have proved to be rather successful in both villages, thanks to their wider outreach and easier accessibility. Larger cooperation between bank and cooperative credit might also favour the spread of formal sources of credit. Considering farmers' needs for adequate input provision and conditions characterising underdeveloped markets at the initial stages of agricultural growth, targeted subsidies to kick-start markets can be effective instruments to reduce farmers' resource deficiencies. Decentralising the targeting system to sound community-based organisms such as community-based village assemblies (Gram Sabhas) could be a useful means to reach those most in need and reduce the risk of corruption and elite capture. However, subsidies should

be introduced in a more advanced phase of development, once basic infrastructure to support markets has been established. This implies that targeted input subsidies would have a larger scope of success in Shinghatagere. Building reliable markets to which farmers can be linked to has been one of the priorities of the direct state intervention. The Indian state still intervenes in the determination of some major crops' prices. Other institutional arrangements, such as cooperative marketing, are still rather underdeveloped in the two observed village economies. In the long-run those alternative institutional arrangements might be effective instruments to establish more remunerative prices to farmers and reduce their dependency on informal intermediaries.

### *7.3.2 For further studies*

The findings of this study, although extensive, relate to a specific context that is too restricted to allow for far-reaching generalisations. For this purpose, further research should consider a larger number of areas with similar initial conditions in terms of agro-climate and basic infrastructural facilities, e.g. irrigation systems. Larger quantitative and qualitative surveys should be undertaken on market-related services. Empirical research on what works, where and why in financial, input and output markets is still relatively underdeveloped and needs further analysis.

More in depth quantitative and qualitative efforts should be undertaken to understand where decentralisation is the best way of answering to problems of service delivery; in other words, which services have shown to benefit most from decentralisation efforts and to what level decentralisation has to be introduced. More rigorous research on a larger scale is required to give insights on potentialities and constrains of service providers, in order to define roles and tasks for public, private and grassroots organisations such as CBOs and NGOs.

There are some side-issues, such as how access and quality to services is perceived by women and marginalised groups, that were expected to be tackled in the empirical research but that have been left open due to difficulties in getting sufficient and reliable data. However, those issues are important when trying to understand whether services are effectively reaching the poorest and most vulnerable categories. This requires extensive SC/ST and gender-disaggregated qualitative analysis. Another significant area of research regards the existence of possible synergies between services. Some have been mentioned in this study (section 2.3.1), but further empirical research is required to test further synergies that have been revealed by the quantitative analysis. Also, reasons that hinder the ability of service

recipients to demand for services should be subject of larger attention. This would help to make capacity enhancement strategies more effective and increase local community participation's in the development process.

#### ***7.4 Limitation of the empirical study***

The two village case-studies have been selected according to the recommendations of local decision-makers and experts. However, they do present limitations for the comparison on the performance of market-related services. This hinges primarily on differences in available irrigation facilities in the two villages. The difference in the kind of irrigation induces different levels of land productivity and production volumes (see section 5.2). In the analysis of what works and what does not work in market-related service provision, this limits a real comparison.

Last but not the least, one needs to stress again the difficulty of describing the process of development of an entire area, to derive factors that might contribute to this process, and to make generalisations. The reality is much more complex than expected. Within the development process “everything is connected to everything else” (Helling, Serrano and Warren, 2005: 10), and there are no universal guidelines for influencing it. Therefore, also in light of the limited depth of data and information gathered, the study cannot come up with specific policy recommendations. Rather, it can provide evidence on how different variables affect such process and how they are connected to each other, thus shedding light on the existing potentials and constraints that affect the overall rural development of an economy.

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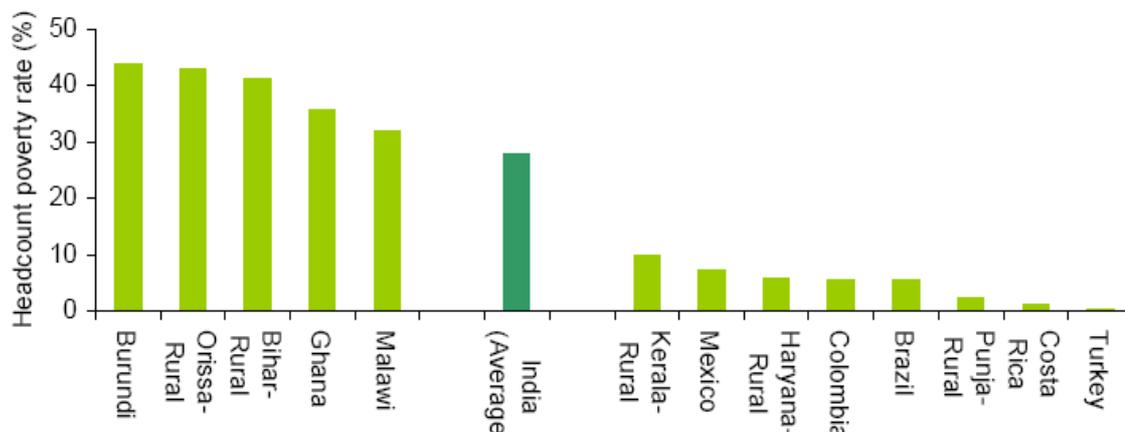
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## ANNEX I

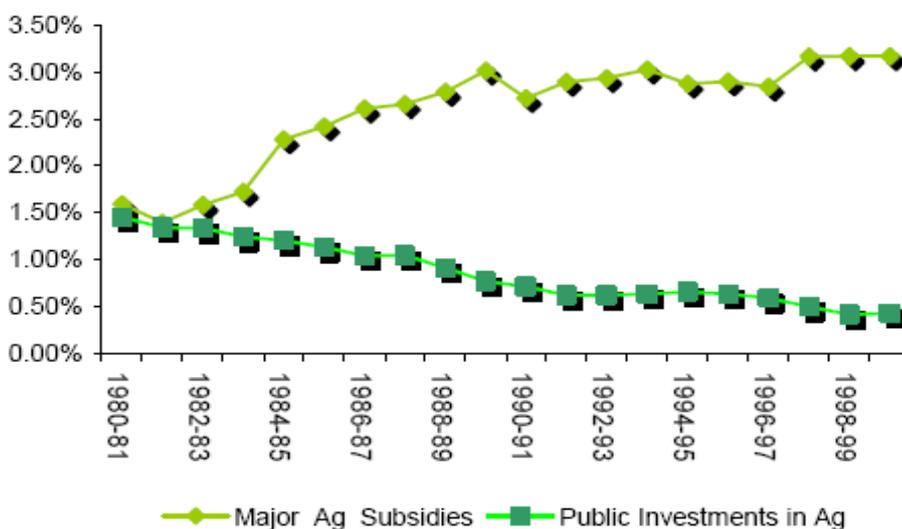
### Poverty rates in Indian states



Source: World Bank, 2007

## ANNEX II

### Trends in subsidies and investments



Notes: Agricultural subsidies include GOI foodgrain and fertilizer subsidies, state government power and irrigation subsidies.

Source: Ministry of Agriculture, Archarya and Jogi, 2004 in World Bank, 2006

## ANNEX III

### Technology, infrastructure and productivity in rural India

	HYVs	Irrigation	Village electrified	Literacy rate	Road density	Production growth	Productivity growth
	%	%	%	%	km/1000 sq. km	%	%
1970	21	23	34	23	2414	100	100.00
1971	24	23	36	24	2523	100	99.11
1972	23	23	37	25	2641	93	91.61
1973	25	24	39	25	2768	97	97.73
1974	26	24	41	26	2858	101	99.64
1975	29	25	44	27	2955	114	113.18
1976	31	25	46	27	3042	105	103.15
1977	34	26	48	28	3309	115	111.70
1978	36	27	51	28	3492	119	113.78
1979	37	27	54	29	3587	119	113.00
1980	41	28	57	30	3670	120	112.05
1981	40	29	60	31	3791	127	116.23
1982	43	29	63	31	3915	125	110.05
1983	41	29	67	31	4011	135	117.88
1984	45	29	70	32	4127	131	113.53
1985	44	30	73	32	4261	141	120.13
1986	46	31	75	33	4400	133	113.86
1987	48	32	78	33	4513	136	113.68
1988	47	34	81	34	4651	152	129.50
1989	53	33	83	34	4809	168	133.75
1990	53	33	85	35	4861	152	120.69
1991	57	33	86	36	4935	152	118.52
1992	56	32	87	37	5035	153	117.56
1993	57	32	87	37	5105	156	118.05
1994	64	33	89	39	5221	165	117.86
1995	59	31	89	40	5196	n.a.	n.a.
<i>Annual Growth Rate (%)</i>							
1970-79	6.25	1.84	5.37	2.47	4.50	1.95	1.37
1980-89	3.10	1.69	4.38	1.61	3.05	3.82	1.99
1990-95	2.10	-0.88	0.96	2.68	1.34	2.09	-0.59
1970-95	4.19	1.20	3.96	2.17	3.11	2.11	0.69

Source: Fan, Hazell and Thorat, 1999 p. 49

## ANNEX IV

### Returns on agricultural growth and poverty reduction to investments and subsidies

	1960s		1970s		1980s		1990s	
	returns	rank	returns	rank	returns	rank	returns	rank
<i>Returns in Agricultural GDP (Rs per Rs spent)</i>								
Road Investment	8.79	1	3.8	3	3.03	5	3.17	2
Educational Investment	5.97	2	7.88	1	3.88	3	1.53	3
Irrigation Investment	2.65	5	2.1	5	3.61	4	1.41	4
Irrigation Subsidies	2.24	7	1.22	7	2.28	6	n.s.	8
Fertilizer Subsidies	2.41	6	3.03	4	0.88	8	0.53	7
Power Subsidies	1.18	8	0.95	8	1.66	7	0.58	6
Credit Subsidies	3.86	3	1.68	6	5.2	2	0.89	5
Agricultural R&D	3.12	4	5.9	2	6.95	1	6.93	1
<i>Returns in Rural Poverty Reduction (Decrease in number of poor per million Rs spent)</i>								
Road Investment	1272	1	1346	1	295	3	335	1
Educational Investment	411	2	469	2	447	1	109	3
Irrigation Investment	182	5	125	5	197	5	67	4
Irrigation Subsidies	149	7	68	7	113	6	n.s.	8
Fertilizer Subsidies	166	6	181	4	48	8	24	7
Power Subsidies	79	8	52	8	83	7	27	6
Credit Subsidies	257	3	93	6	259	4	42	5
Agricultural R&D	207	4	326	3	345	2	323	2

Source: Fan, Gulati and Thorat, 2007p.20

## ANNEX V

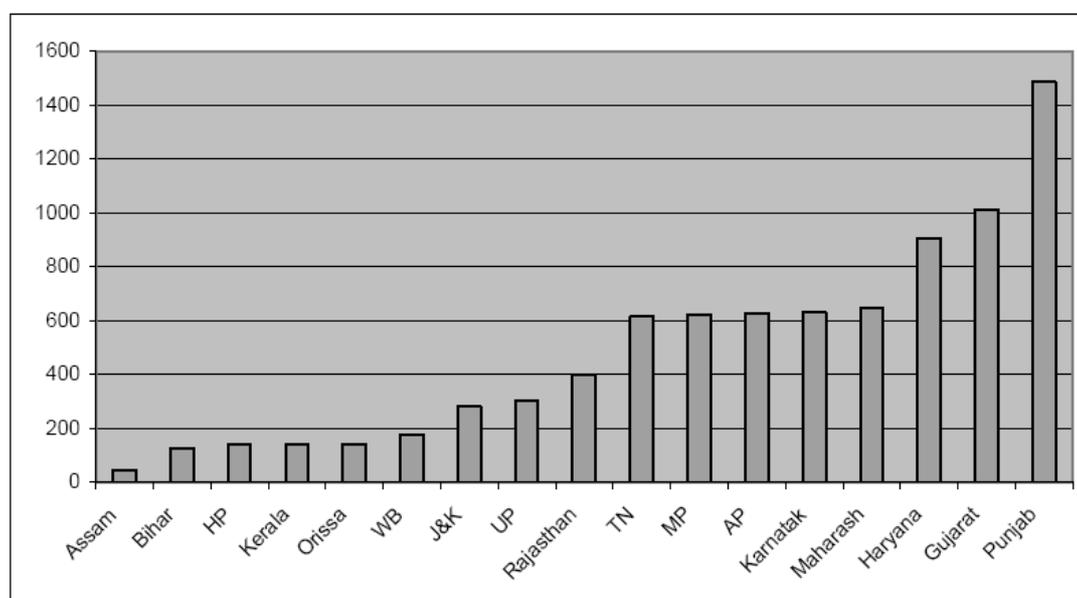
### Indebtedness of rural households (percentages)

Source	1971	1981	1991
Institutional credit	29.2	61.2	56.6
Commercial banks	2.2	28.0	29.0
Cooperatives	20.1	28.6	18.6
Government	6.7	4.0	5.7
Insurance	0.1	0.3	0.5
Provident fund	0.1	0.3	0.9
Others			1.9
Non-institutional credit	70.8	39.4	43.4
Professional moneylender	13.8	8.3	9.4
Agricultural moneylender	23.1	8.6	6.3
Relatives/friends	13.8	9.0	6.7
Landlords	8.6	4.0	4.0
Traders	8.7	3.4	7.0
Doctors, lawyers, etc			11.2
Other sources	2.8	4.9	4.9
Sources not specified		0.6	3.8

Source: All India Debt and Investment Survey 1991-92

## ANNEXES VI

### Input subsidies per agricultural person



Sources: World Bank, 2006

## ANNEXES VII

### PRA Exercise on Services

The PRA exercise on service mapping has been carried out with the intent to understand which is the perceived importance of rural services, their accessibility in terms of distance and how frequently they are used.

In both the villages, local experts gathered together the local community for the exercise. The exercise then proceeded as followed:

- i) The respondents listed and subsequently ranked the services
- ii) After the ranking, round cards of different sizes have been assigned to each service according to their importance
- iii) The distance of services from the village has been evidenced by placing those cards on the ground
- iv) The thickness of the lined used indicated the frequency of usage of those services

Group composition and developing group dynamics widely affect this kind of exercise and the service priorities highlighted by the participants.

#### *Service Ranking in Shinghatagere<sup>87</sup>:*

1. Public Health Facilities (hospital and medical store) and Bank (credit)
2. Consumer Society
3. School and Anganwari (great importance is shown for education, which comes first before services offered by the GP)
4. Milk Dairy
5. GP office (they associate with that electricity, water, roads..)
6. High school
7. Seeds and Fertilisers
8. Veterinary Hospital (not perceived as an important service, because in case of need is the doctor coming to the village)

#### List of participants:

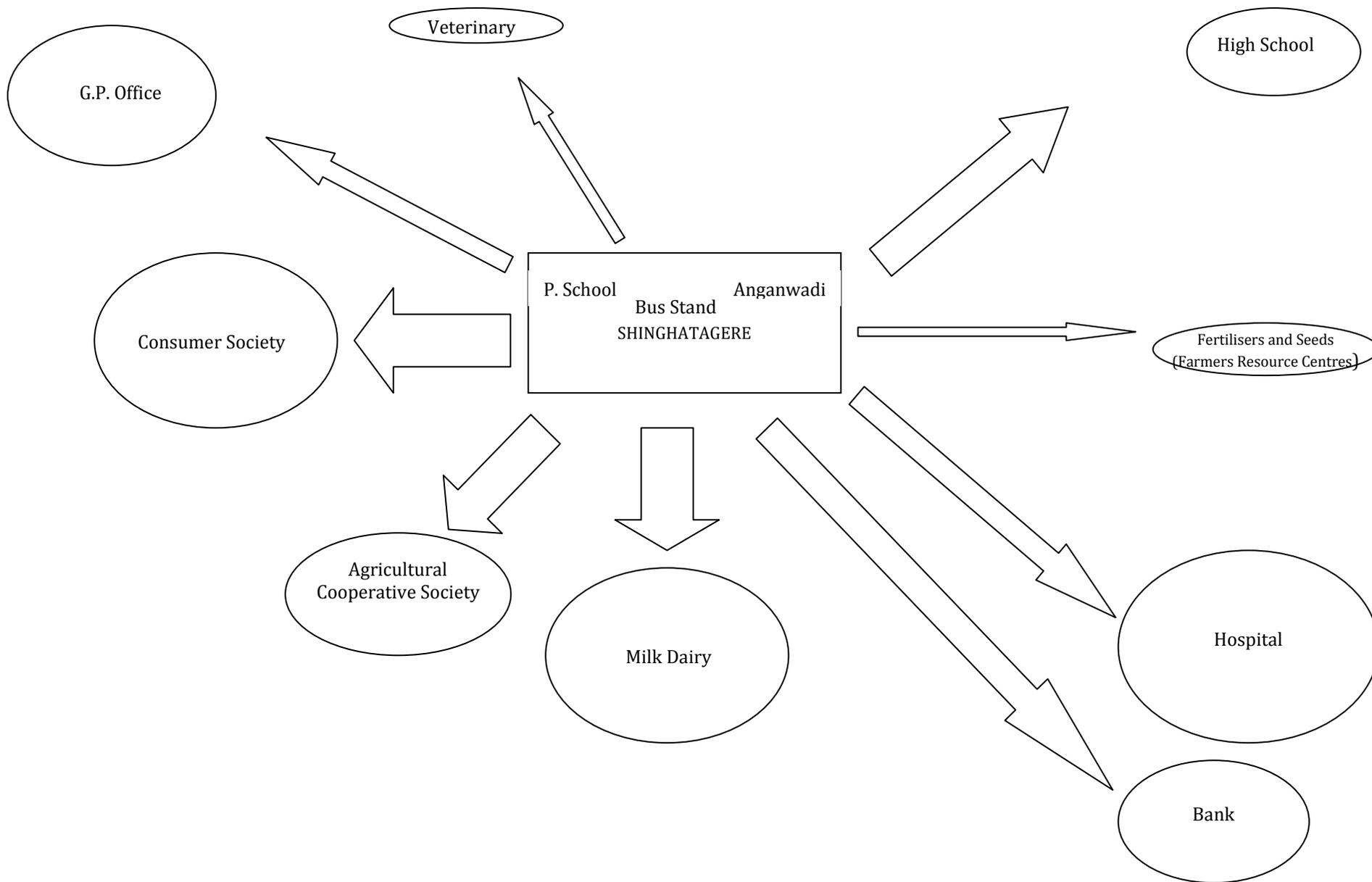
Putamma Laxamma (Housewife)	Savitha (L)
Shobha (HW)	Sannamma (HW)
Puttamadamma (HW)	Gowramma (L)
Dundamma (Labourer)	Hombalamma (HW)
Sidamma (L)	Savithramma (L)
Shivamma (L)	Rajamani (L)
Manju (bill collector)	Kanakarathma (Teacher)
Devamma (HW)	

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<sup>87</sup> Notes on PRA exercises in Shinghatagere:

- i) Participants have been mostly female, members of SHGs. It has been difficult to involve men, mostly working in fields. Results obtained are therefore not extendible to the whole community.
- ii) The veterinary hospital is rarely accessed because the doctor is usually coming to the village
- iii) Bank, farmers' resource centres and hospital are perceived as most distant services

**PRA Exercise – Service Mapping: Shinghatagere village**



*Service Ranking in Chunchanagahalli<sup>1</sup>:*

1. Consumer society (they get here rice, kerosene, wheat, sugar on subsidised rates).
2. Hospital
3. Veterinary hospital
4. Bus stand
5. V.S.S.B.N cooperative society
6. High school
7. Post office
8. Bank
9. Market
10. Milk dairy
11. Anganwari
12. Primary school

*List of participants:*

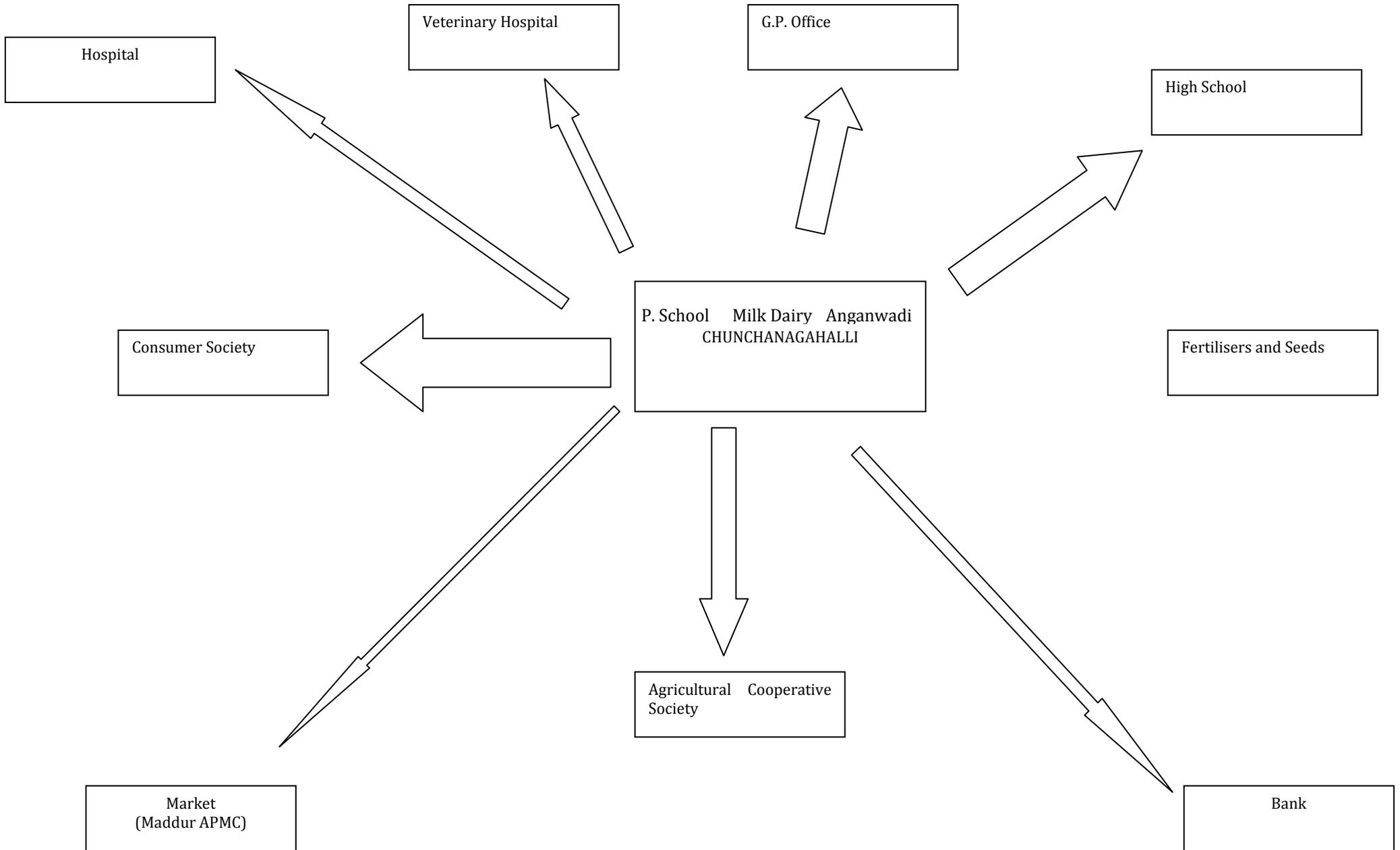
<i>Nagarayu (Farmer)</i>	<i>Muttulaxmi (HW)</i>
<i>Vinesh (F)</i>	<i>Chikkamanamma (HF)</i>
<i>Mariswamy (F)</i>	<i>Kadaiah (F)</i>
<i>Puttaswamy (F)</i>	<i>Chikkattimmegowda (F)</i>
<i>Chikkaraju (F)</i>	<i>Chikkaligaiah (F)</i>
<i>Siddamma (HW)</i>	<i>Yashodamma (HW)</i>
<i>Puttegowda (F)</i>	<i>Sannegowda (F)</i>
<i>Siddawah (GP)</i>	<i>Sannegowda (F)</i>

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<sup>1</sup> Notes on PRA exercises in Chunchanagahalli:

- i) By contrast, in Chunchanagahalli the exercise was largely attended by men, most of them labourers with no occupation at the moment. Women were predominantly working in fields.
- ii) Low priority for market services because they mostly produce for subsistence purposes. The card indicating the market has been placed at far distance from the village.
- iii) The Bank has been also placed at remote distance. Mostly SHG members are having access to it.
- iv) During the PRA exercise, the community revealed to use the cooperative society with low frequency.
- v) The distance to the bus stop was perceived as one of the major difficulties, especially for women returning to the village during the night.
- vi) During both the PRA exercises, social mapping and service mapping, there has been a rather high participation from the villagers.

**PRA Exercise – Service Mapping: Chunchanagahalli village**



## ANNEXES VIII

### List of Interviewed Service Recipients - Shinghatagere

#### *Service Recipients*

- 1) Devaamma
- 2) Raghu Raja Urs S/o Chennaraj Urs
- 3) Siddaraju s/o Siddegowda
- 4) S.D. Sidappa s/o Dewegowda
- 5) S.C. Dewegowda (Mariswamy)
- 6) Somashekar
- 7) Channapa
- 8) Gita w/o Krishnegowda
- 9) Siddegowda s/o Kenchegowda
- 10) Basavaraj URS s/o Madaraj URS
- 11) Shivanna
- 12) Ramesh s/o Kenchegowda
- 13) Sakamma w/o Siddegowda
- 14) Lakshmi
- 15) Siddegowda
- 16) Ramesh s/o Kenchegowda
- 17) Ramegowda s/o Chowdegowda
- 18) Siddegowda s/o Chowdegowda
- 19) Laxmanna w/o late Manchhari
- 20) Shivananjamma w/o late Kullahalagappa
- 21) Jayamma w/o late Jayaramu
- 22) Nangaraj URS s/o Chennaraj URS
- 23) Dundamma w/o G.M. Mallaiah
- 24) Sakamma w/o Ganesh Achar

### List of Interviewed Service Recipients - Chunchanagahalli

- 1) Kullamma w/o late Kullattimmegowda
- 2) Karigowda s/o Chikkaputtegowda
- 3) Yashodamma w/o Narayanashetty
- 4) Putayayama w/o Chennai
- 5) Shivakuyumar s/o Chikkalhamawah
- 6) Marereswemi s/o Chikkadegowda
- 7) Yashodamma w/o Puttegowda
- 8) Chiccataiamma w/o Shivingaia
- 9) Doddalhayamma w/o late Somanna
- 10) Shivaramu s/o Siddegowda
- 11) Liraiah Muddirashetty
- 12) Ningamma late Bureja
- 13) Liraiah Muddirashetty
- 14) Siddaiah s/o Thammannagowda
- 15) Siddegowda s/o Karigowda
- 16) Nagesh s/o Ramana
- 17) Marilinyaia s/o Patel Kadegowda
- 18) Boregowda s/o Chikkadegowda
- 19) Sivanna
- 20) Raju s/o Siddegowda
- 21) Vakalaxshmi w/o Nagaraju
- 22) Gopalrey Urs s/o Mallaray Urs
- 23) Doddaiedegowda s/o Jaragowda
- 24) Chikkalayamma w/o late Siddegowda

***List of Interviewed Service providers***

V.S.S.B.N. - Madarahalli GP

Mr. Dewegowda (manager)  
Mr. Sivanna (president)  
Siddaramu (accountant)  
Lingapparas (clerk)

G.P. Madarahalli

Vimaridewi Gowda (Secretary)

G.P. president Madarahalli

Prasilla w/o Shankar Lingeigowda

V.S.S.B.N. - Bellur GP

Mr. Hanumanthappa (manager)

APMC Maddur

Mr. Madhaswamy (assistant director)  
Mr. Y.P. Timappa (assistant secretary)

Agricultural Department

Madhavaswamy (assistant director of the agricultural department)

# ANNEXES IX

## INTERVIEW GUIDELINES

### Questionnaires for rural service recipients (household level)

#### Interviewed:

Name:

Village:

GP:

Taluk:

District:

APL/BPL:

SC/ST/OBC/General:

Gender of the interviewed:

*Introduction of myself, the interpreter and explain the purpose of the interview*

#### **Section A: General Information and survey on level of infrastructure and social services**

A1: How many family members are present in your household?

A2: Which is your main occupation? Which are your major sources of income (on farm/off-farm activities)?

A3: If the respondent is a farmer owning land: which is the size of your land? Are you producing subsistence crops or marketable crops?

A4: Which rural services (infrastructure<sup>1</sup>, social services, productive services, irrigation..) do you think could improve/have improved the living conditions for you and your family? Why?

A5: How would you assess the access to these rural services in your case?

A6: How would you assess the quality (to what extent are you satisfied)?

A7: What has been done from the villagers to improve/maintain access to those services? How do you judge the role of self-help groups, users associations or cooperatives in the provision of the services?

A8: Are you Member of a self-help group, user association, cooperative or caste association (since how long?)? If not why?

A9: In being a member, are you receiving additional services? If yes, which services?

A10: If rural services improved/worsened in the last years (if age permits, ask since 1995, first election under requirements), what do you think has contributed to improved/deteriorated service delivery?

A11: What do you judge to be the major constraints for rural service delivery in your village? (remoteness, lack of funds, norms..?)

A12: Has a woman or a SC/ST member been elected Pradhan since 1995? If yes, how many times?

A13: Did you observe differences in service provision after the election of a female GP Pradhan (compared to a male Pradhan)? Give details.

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<sup>1</sup> Infrastructure: specify water, roads, buses, drainage...

Social services: specify school, Anganwadi centre, hospital..

## **Section B: Input and output markets**

Input supply and credit

B1: How do you personally get access to input services? How frequently do you get access to the service?

B2: Who are the actors providing the service?

B3: If there are different providers, what are the major differences between these actors in terms of access and quality (price and quality)?

B4: Who was providing input services in the past?

B5: Have prices and quality increased/decreased in the last 10-15 years?

B6: Have you ever taken loan for agricultural purposes? How many times and from whom? Were you able to repay the loan?

Output markets:

B7: Where do you sell your products?

B8: Are you satisfied with the output prices you are getting? If not, what are the major problems?

B9: How is the service delivered (through contracts or informal rules..)?

B10: Where do you get information on output and input prices?

B11: How have you used the income generated from the selling of your products (impact on living conditions: improved house, sent the children to high school, expanded production..)?

B12: Which are the major problems that you face at the moment?

(Additional Information)

Level of education of HH head and spouse:

### **Questionnaire for service providers**

#### **V.S.S.B.N cooperative society**

Name of the interviewed:

Institution:

Position:

Education:

Short introduction on myself, on the purpose of my research and of the interview

1. General Information:

1.1 When was the cooperative funded?

1.2 How is the cooperative organised? Does it have an apex organisation? Are you interlinked with other groups/cooperatives in the area?

1.3 How many branches does the agricultural cooperative have? How many members (female/male)? At which level (block level, GP..?) is it operating?

- 1.4 In being a member of the cooperative, which are the services farmers can get access to? Ask details (e.g. agricultural loans: interest rate, which collaterals they ask, RTC card..)
- 1.5 How do/ from whom do you get funds and resources to finance your activities? How is the cooperative registered?
2. Which do you judge are the major problems faced by Karnataka's small farmers with regard to agricultural production (access to inputs, output prices, credit)?
3. Who has access to your services (who are the members)? What has a farmer to do in order to receive the services of the cooperative?
4. How have farmers been performing after getting those services (repayment levels, increase in demand for loans quantity and amount-wise)?
5. Which problems are there in the provision of the service you are providing?
6. Why do these problems occur and what could be the potential solution?
7. What has changed in the last years in terms of input/credit service delivery?
8. Did you register changes in the demand for credit/agricultural inputs in recent years? Where is most of the demand coming from?
9. Do you know which other actors provide similar services (government, privates, NGOs)? How are your responsibilities overlapping, cooperating, conflicting with those other institutions?
10. Which do you think are the advantages/disadvantages of the cooperative?
11. Which do you think are the most important services for alleviating poverty levels in your target area?
12. Are there synergy effects between different services? Does improvement in a particular service sector bring about an improvement in other service sectors?
13. Which are your expectations for the future?

**Agricultural Department (related to Farmers' Resource Centres)**

Name of the interviewed:

Institution:

Position:

Education:

Short introduction on myself, on the purpose of my research and of the interview

- 1.1 Which major services are you providing?
- 1.2 In which areas are you operating (taluk, GP or village level)?
- 1.3 How do/ from whom do you get funds to finance your activities?
- 1.4 Although the better quality and lower prices of the inputs you are providing, farmers often prefer to go to private dealers because inputs are more easily accessible. Why do you face problems in stock availability? What could be the potential solution?
2. Where is most of the demand for your services coming from (who are the major users, marginal, small, large farmers?)?
3. What has a farmer to do/to have in order to receive the services you are delivering (e.g. RTC card..)?
4. Do you know which other actors provide similar services (government, cooperatives, privates, NGOs)? How are your responsibilities overlapping, cooperating, conflicting with those other institutions?
5. Are there particular villages/GPs where the demand for the services you are providing is higher/lower?
6. Which problems are there in the provision of the service you are providing?

7. Why do these problems occur and what could be the potential solution?
8. Which do you judge are the major problems faced by Karnataka's small-farmers with regard to agricultural production?
9. Did you register changes in the demand for credit/agricultural inputs in recent years?

### **Agricultural Produce marketing Committee (APMC)**

Name of the interviewed:

Institution:

Position:

Education:

Short introduction on myself, on the purpose of my research and of the interview

1. General Information:

1.1 How is the committee organised?

1.2 How do/ from whom do you get funds to finance your activities?

1.3 In which areas are you operating? Taluk, GP or village level?

1.4 From how many farmers are you collecting crops?

2. Which do you judge are the major problems faced by Karnataka's small-farmers with regard to their on-farm income generating activities (access to inputs, output prices, credit)?

3. Which are the major services the APMC is delivering?

4. Who has access to APMC services? How can farmers get access to the facility you are providing?

5. Did you observe an increase in demand for the services you are providing?

6. Most of the farmers we talked to are selling their products (paddy, ragi) to the middlemen. Why they don't use organised markets?

7. Which other problems are there in the provision of the service you are providing?

8. Why do these problems occur and what could be the potential solution?

9. Do you know which other actors provide similar services? How are your responsibilities overlapping, cooperating, conflicting with those other institutions?

### **Questionnaire for service providers - GP president**

Name of the interviewed:

Institution:

Position:

Education:

Short introduction on myself, on the purpose of my research and of the interview

1. When have you been elected as GP president? How have you been elected (election, how many other candidates)? How long are you going to stay in office?
2. What was your occupation before becoming the president of the GP?

3. What measures have you implemented with regard to service delivery since you are in the position of president?
4. How usually do you make decisions (individually, discussing with other GP members)?
5. Who is usually demanding you services and which are those services (particularly women, which services are they demanding)?
6. How do you see the condition of women in your target area? Which do you think are the major problems they are facing?
7. What do you think you could do to improve services more relevant to women's concerns?
8. Are you planning to do something for such services in the future?
9. If you plan to allocate more resources in women-related services in the future, how much it will be allocated? How many Gram Sabha meetings take place in one year? Education and age if possible:

### **Questionnaire for service providers – GP secretary**

Name of the interviewed:

Institution:

Position:

Education:

Short introduction on myself, on the purpose of my research and of the interview

How long have you been working as a secretary for the GP? Which was your previous occupation?

Which major services is the GP providing? In which villages are you operating? How many HHs/people do you serve?

Which problems are there in the provision of the service you are providing?

Why do these problems occur and what could be the potential solution?

Do you know which other actors provide similar services? How are your responsibilities overlapping, cooperating, conflicting with those other institutions?

How do/ from whom the GP get funds to finance your activities? How does the GP allocate these resources for service provision/programmes?

Who is your target population group for the different programmes/services the GP is providing? What have been the criteria for the selection of the programme/service beneficiaries?

How far did you achieve your objectives so far (in terms of people targeted/people reached)?

Did you observe changes in the poverty levels in the targeted region?

Which do you think are the most important services for alleviating poverty levels in your target area?

Are there synergy effects between different services? Does improvement in a particular service sector bring about an improvement in other service sectors?

Which villages (areas) have been most successful in the provision of services (per service sector)? Which less? Why do you think has that happened?

Did you register changes in the demand services in recent years? Who has been demanding more services?

Which are your expectations for the future?

Additional information:

- i) How many Gram Sabha take place in a year? Which is the attendance to those meetings (high.low)? Are all the GP members attending the meeting?
- ii) How many women and SC/ST members have been elected as president?
- iii) What is the women share of attendants and which is the share of participants? What about SC/ST?

