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**Entrepreneurial Processes in An Apparently Uniform Context:
A Study of Rural Farmers in Sri Lanka**

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To my beloved family Badra, Sonali, Wasath, my parents, and my dearest friend Rohan...

ABSTRACT

Entrepreneurial Processes in an Apparently Uniform Context: A Study of Rural Farmers in Sri Lanka

The primary focus of this research is the role of entrepreneurship in the economic success of rural farmers in Sri Lanka. The village in which this research takes place was created (administratively) from a cleared jungle, and populated in 1984 by similarly-endowed individuals not generally known to each other, thus controlling a significant number of success-influencing socio-economic variables (arising from past generations). This study, therefore, represents a “unique natural experiment” as it focuses on the “entrepreneurial process” and demonstrates how differentiation arises.

A Multiple Embedded Case-Study strategy is adopted: the selected village provides the socio-economic and physical boundaries, and the farmers and their income generating processes are sub-cases. Successful inhabitants are identified through the folk definition of economic success: in terms of both social and economic values. Qualitative field methods are supplemented by quantifiable evidence. Research questions are answered by contrasting the socio-economic value-extraction processes of the successful farmers with the routine paddy-based socio-economic activities of the unsuccessful farmers.

The environment in which inhabitants operate is constrained by limited resources and various other biophysical and socio-economic factors. The pressure exerted by these environmental constraints restricts the farmers’ choices of action and forces the economically-unsuccessful farmers to form a cycle of routine socio-economic activities. This routinely ‘vicious cycle’ is production-oriented paddy-farming and culminates in consumption activities. The eventual result is often crop-failure and consequently economic failure brought about by inefficient and ineffective resource use. This pattern shows a significant degree of uniformity. In contrast a variety of opportunities are perceived and capitalized on by entrepreneurs.

The task of the entrepreneur, within the same environment, is to extract value by spotting these opportunities and match them with available or mobilised resources, resulting in capital-accumulation and wealth-creation.

The findings illustrate how entrepreneurial and managerial value extraction strategies, in a limited resource context, complement each other and demonstrate that the managerial function is an integral component of entrepreneurship. By distinguishing amongst the different tasks of the entrepreneurial and managerial functions, the findings also confirm that these two functions are interdependent elements in influencing economic success. The thesis findings also indicate that certain entrepreneurship and strategic management principles, which have been proven applicable for the affluent Western world, are also relevant to small-scale rural farmers in the third world context who might be expected to struggle in abject poverty in order to scrape an existence.

The findings also contribute a new dimension to the entrepreneurship literature, by explaining how “pluriactivity” is being adopted as an entrepreneurial value-extraction strategy, demonstrating how the terms “pluriactivity” and “diversification” can be utilised in relation not only to entrepreneurship and management but also to the economic growth of farmers.

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Beginning.....

"The Farmer is an undertaker (entrepreneur) who promises to pay to the Landowner, for his Farm or Land, a fixed sum of money (generally supposed to be equal in value to the third of produce) without assurance of the profit he will derive from this enterprise. He employs part of the land to feed flocks, produce corn, wine, hay, etc. according to his judgement without being able to foresee which of these will pay best. The price of these products will depend partly on the weather, partly on the demand; if corn is abundant relative to consumption it will be dirt cheap, if there is scarcity it will be dear. Who can foresee the number of births and deaths of people in a state in the course of the year? And yet the price of the Farmer's produce depends naturally upon these unforeseen circumstances, and consequently he conducts the enterprise of his farm at an uncertainty" (Cantillon, 1755:49).

CHAPTER ONE

The Problem Background And The Justification Of The Study

1 Introduction and overview

The underlying generic question upon which this thesis is based is “Why do certain small scale rural farmers become economically more successful?” This allows us to locate the research interest within the rubric of the processes by which entrepreneurs match opportunities and resources in innovative ways and thereby add value in terms of capital accumulation and wealth creation. This type of research is warranted by the lack of grass root level investigations to see why there is a large heterogeneity in socio-economic status despite macro policies to achieve equity. The research will focus on the rural agricultural sector in Sri Lanka, where farmers are heterogeneous in respect of a multitude of socio-economic factors.

1.1 Specific research context: the agricultural sector in Sri Lanka

The agricultural sector in Sri Lanka currently accounts for about 24 percent of the nation's GDP. About 2.2 million people are directly employed within this sector, which remains an important source of income for about 70 percent of the population. About 31 percent of the total land area in Sri Lanka is under cultivation (Samarathunga and Dasanayake, 1991), of which about one-half is devoted to plantation crops, 45 percent to paddy production and the remainder to the production of other crops including fruit and vegetables (Schermerhon, 1986).

The major characteristic of the Sri Lankan agricultural sector, as in many other developing countries, is that it is dualistic. Two different sub sectors i.e. plantation and the rural subsistence (with diffused boundaries), exist side by side.

As indicated before, the Sri Lankan rural farming sector is composed of a heterogeneous farming group with a minority of economically successful (Gunatilake *et al*, 1992; Hettige, 1982; Karunan, 1992 Paranavithana, 1985; Shanmugarathnam, 1984) farmers. This minority of wealthy farmers control the bulk of the means of production and exchange in the rural sector. On the whole these farmers possess the basic characteristics of small scale Limited Resources Farmers (LRF), i.e. “a group of farmers that is not endowed with adequate productive factors, skills, and organizational support to move into the mainstream of economic activity in the farm sector” Davis (1991:1477) (see also Colette and Wall, 1978; Cornaman *et al*, 1982; Dagher and Christy, 1991; Gebremedhin, 1991; Jones, 1991; West, 1979; Wysong and Handwerker, 1989 for basic characteristics of LRFs).

1.2.1 Problem background: pre and post 1977 economic policies and their relevance to entrepreneurship

Before 1977, the rural agricultural sector was highly protected. Efforts concentrated on the import substitution of rice and other food crops (Gunatileke *et al*, 1992; Thorbecke and Svejnar, 1987; Lee, 1977). Guaranteed price schemes (GPS), combined with state purchase of products, provided the farmers with an assured market with stable prices. This was possible because the state was both the importer and largest distributor through food rationing. Furthermore, farmers benefited from subsidies until 1988 including

fertilizer subsidies (Gunatilleke *et al*, 1992). Other inputs such as agrochemical and tractors benefited from low import duties or even exemption from duty (Gunatilleke *et al*, 1992; Moore, 1984). Therefore the rural agricultural sector, with its heavily protected and regulated market and its wide array of subsidies and other forms of state support such as agricultural extension services, developed in an environment which was heavily dependent on the state.

In contrast to the above policy regime, the package of policies introduced by the UNP government (i.e. the United National Party) in November 1977 and thereafter, was mainly aimed at an export-oriented free market economy (Gunatilleke *et al*, 1992; Bruton *et al*, 1992; Shanmugarathnam, 1984, Karunan, 1992). The post 1977 reforms dismantled most of the exchange controls and import quota systems, removed subsidies and administered prices (Gunatilleke *et al*, 1992), thereby liberalizing the internal trade of farm products (Karunan, 1992:114). Furthermore, the role of the government sector in marketing agricultural products (RONCO, 1986) and providing agricultural extension services gradually diminished. The open economic policy sought to provide incentives to private investors in agricultural production. The fundamental objective was to promote export-oriented agribusiness industry through multinational collaborations (Karunan, 1992). Consequently, a trend emerged which involved the moving of large scale export-oriented agricultural firms into the rural sector. This was in order to organize the small producer - through providing technical know-how, credit and marketing - of certain export items such as gherkin, ornamental fish, cut flower, foliage and so on (Gunatilleke *et al*, 1992).

It has been observed that the introduction of open economic policies replaced the personal non-market ties (such as exchange of labour relations) that determined the reproduction of production units of the typical peasant household with market ties such as hired labour relations (Shanmugarathnam, 1984:22). As a result individual farmers were required to respond to market forces (though with a certain degree of imperfection according to Shanmugarathnam, 1984) which operated in a dynamic, and therefore very uncertain, environment - one that provided various economic opportunities for those who could rely on their entrepreneurial abilities to pursue them.

1.2.2 Free market economy, entrepreneurship and economic success

Much of the literature suggests that entrepreneurs exist and thrive mainly in societies with decentralized economic power (Cole, 1964; Casson, 1982:25, Kirzner,1984; Gilad,1982; Pulver, 1987:94; Timmons, 1994:30,34). This is because certain institutional practices in market economies tend to encourage a high level of entrepreneurial activity demonstrated by (i) a free and open economy that permits equal access to entrepreneurial opportunities (ii) a guarantee of ownership in property legally acquired and (iii) stability of institutional practices that establishes previous points i and ii (Kirzner, 1984:55). It may be argued, therefore, that societies with decentralized economic power provide environments of economic freedom (i.e. environments free from special privileges or blockages against new entrants Kirzner,1984:57) which stimulate entrepreneurial spirit (Gilad, 1982) resulting in economic growth. It follows that the entrepreneur, as the creator of new wealth (Schumpeter,1934), is the central figure in economic (for example Baumol,1968:65; Broehl,1978; Hoy, 1983; Hoy, 1987; Gilad,1982; Kirzner,1984; Schumpeter,1934; Wortman,1990a:222) and business

(Anderson, 1995; Fredrick and Long, 1989:4; Jacobson, 1986:29; Reynold, 1991:57; Jacobson, 1986:26) development as well as the basis of change and growth in society (Broehl, 1978; Chell, 1990:187; Thropman and Morningstar, 1989).

1.2.3 Basic research issue: the role of entrepreneurship in the economic success of rural farmers

It may be argued that the above points have a very practical relevance to Sri Lanka's rural farming sector. Research findings (Gunathileka *et al*, 1992:185; Gunatilleke, 1992:10) suggest that the pre-1977 economic policy regime of the country retarded the growth of the market-oriented entrepreneurial population which would have been capable of identifying economic opportunities and diversifying the rural economy.

This contrasts markedly with the post-1977 policy regime, as empirical research findings indicate that the environment created by open economic policies has facilitated the generation and accumulation of wealth by some rural farmers. This is visible in terms of: (a) widening of the gap between the previously-noted (see section 1.1) economically successful and poorer groups of farmers (Gunathilleke, *et al*, 1992; Karunan, 1992; Shanmugarathnam, 1984) and (b) the formation of a new stratum of accumulation-motivated "dynamic entrepreneurs" (Shanmugarathnam, 1984). This latter finding is closely related with that of similar findings by Manchin and Szelenyi (1985) on the influence of market reforms which led to the emergence of a new entrepreneurial stratum in Hungary.

On the whole these economically successful farmers have been labeled by researchers as “entrepreneurial farmers” (Hettige, 1982:21; Shanmugarathnam, 1984:23) and distinguished from the rest of the farming population based on the following criteria:

- (i) they do not engage in the process of physical production themselves i.e. their land is worked entirely by wage labourers (however, the above-noted accumulation-motivated “dynamic entrepreneurs” use their family labour and supplement it with hired labour during peak seasons (Shanmugarathnam, 1984:23);
- (ii) they produce mainly for the external market (i.e. they are market-oriented) and
- (iii) they engage in various other non-farming activities in the countryside.

It appears that these researchers tend to use the term entrepreneur to designate anybody who is engaged in small business operations (see Bryant, 1989:340 for a similar argument). However, much of the literature suggests that not all small business operators are entrepreneurs (Bryant, 1989: 340; Kirchhoff, 1994:423; Saylor, 1987:58; Wortman, 1990b:338). There has been little or no research (in the field of entrepreneurship) to investigate how entrepreneurial these economically successful farmers are. Therefore, the validity of the label “entrepreneurial farmers” and their above-noted basic characteristics are questionable. It may be argued, in this setting, that research is warranted to differentiate/distinguish entrepreneurial farmers from the rest of the rural farming population so that their fundamental contributions to economic/business development could be meaningfully analyzed (Brazeal and Weaver,

1988:134). This issue leads to the generic research issue of this thesis i.e. “the role of entrepreneurship in the economic success of rural farmers in Sri Lanka”. This type of research is indeed further warranted as there has been little or no grass-root level farmer-oriented research in the country (Abeygunawardena, 1991:3)

1.2.4 Basic research questions and objectives: the role of entrepreneurial activities/processes in the economic success of rural farmers

The field of entrepreneurship has been theoretically contributed to by researchers from a variety of subject areas such as economics, sociology, anthropology, psychology and political science (Fredrick and Long, 1989). Despite these contributions, it is quite clear that there are still disagreements on how to differentiate the terms entrepreneur /entrepreneurship (Casson, 1982; Chell, 1990; Frederick and Long, 1989; Gartner, 1989; Kent, 1984; Low and MacMillan, 1988; Morris *et al*, 1994; Pridavka, 1979; Rosa and Bowes, 1990; Binks and Vale, 1990; Wortman, 1987). Casson (1982:1-22) puts forward two approaches to define entrepreneurship i.e. (a) the indicative approach and (b) the functional approach (p22). The indicative approach, according to Casson, provides a description of the entrepreneur by which he¹ may be recognized whereas - in the functional approach - the entrepreneur is identified by what he does.

As far as the indicative approach is concerned, attempts have made to differentiate successful entrepreneurs from the rest of the population based on diverse criteria i.e. diligence, thrift, sobriety and prudence coupled with capital, innovation and ownership of factors of production (Weber, 1930); “desire for independence” (Collins and Moore

1964); “need for achievement” (Hornaday and Abound, 1971; McClelland,1967); initiative, assertiveness, efficiency-orientation, systematic planning, commitment to work contract (McClelland, 1986); internal locus of control (Brockhaus,1982; Brockhaus and Horwitz,1986; Brockhaus and Nord, 1977; Begley and Boyd, 1986); risk-taking propensity (Begley and Boyd, 1986; Sexton and Bowman,1985); tolerance of ambiguity (Schere,1982; Sexton and Bowman,1985) need for autonomy, dominance, independence combined with a low need for support and conformity, and a capacity for endurance (Sexton and Bowman,1985). These approaches can mainly be categorized into three main areas viz. personality traits, values and behavioural traits (See Brazel and Weaver, 1988:134).

With regard to personality traits, it can be argued that there is as much difference amongst entrepreneurs as between entrepreneurs and non-entrepreneurs (see Gartner,1985). Grasley (1986:145) states that “there is no universally accepted profile in specifying personal characteristics that would facilitate in identifying (sic) potentially successful entrepreneurs”. Rigorous empirical research has failed to identify any trait strongly associated with entrepreneurship (Aldrich and Zimmer,1985:5; Anderson, 1995:135). It has also been argued that personality traits or qualities may change within an individual over their life cycle, or even as a business matures, or as circumstances/context change (Anderson,1995:135; Binks and Vale, 1990:57).

As for behavioural attributes, Chell (1990:190) notes that an entrepreneur learns through experience and modifies his behaviour accordingly. The same author also argues that the need for modification of the existing behaviour or development of a new behaviour

by the entrepreneur is necessitated by the development of his business (p 191). According to Bygrave (1994:4) there appears to be no neat set of behavioural attributes that separates entrepreneurs from non-entrepreneurs (Bygrave, 1994:4).

It has been argued, in the above context, that the entrepreneur and his success should be studied in a more useful manner by looking at the “entrepreneurial activity/process” (Bryant, 1989; Bink and Vale, 1990:18; Morris *et al*, 1994) in which the entrepreneur is identified/differentiated by what he does (or how he acts) and the outcome of his actions i.e. creation and accumulation of wealth² (see Chell, 1990:192; Kilby, 1971; Morris *et al*, 1994; Shapero, 1984:23, Stevenson and Jarillo, 1990:18 for arguments of a similar nature). This stance is based on the argument that success is determined by the behaviour of the entrepreneur, as it is expected that he behaves in a manner that is likely to increase his economic/business success (see Lawrimore, 1988:76 for a similar argument).

The previously-noted basic research issue (i.e. section 1.2.3) can therefore be rephrased as “what is the role of entrepreneurial activity/process in the economic success of rural farmers in Sri Lanka?”. This in turn leads to the major research objective of this study i.e. to study the roles of entrepreneurial activity/process in the economic success of rural farmers in Sri Lanka.

The rationale of applying this approach to the Sri Lankan rural context is (a) to identify (for sampling purposes) the entrepreneurial farmers based on the outcome of their economic actions (i.e. selecting wealthier farmers as winners) and (b) to compare and contrast their processes of income-generating (i.e. commercial) activities with that of economically unsuccessful farmers so as to investigate the influence of economic behaviour on economic

success/failure in the context of entrepreneurship theories. This is under the assumptions that: (a) every farmer had equal access to the new economic opportunities created by open economic policies and (b) the higher the impact and frequency/intensity of entrepreneurial activity/process associated with any particular farmer (or business entity) the greater that farmer (business entity) approximates to the construct of the entrepreneur (see Morris *et al*, 1994; Vale and Binks, 1990:9).

1.2.5 Practical difficulties of applying the process approach: all the wealthy farmers in a given rural location may not be entrepreneurs

The practical difficulties of applying this approach lie mostly in the sampling stages (i.e. in picking wealthier farmers as winners), as all the wealthier farmers in a given rural location may not necessarily be entrepreneurs. This is basically due to a large number of external factors (other than the entrepreneurial function) that influence the economic success of rural farmers. The main extraneous factors are (a) land (ownership, control, size, productivity, location in terms of access to water and roads), (b) acquired or inherent positions in the local power structure and (c) access to working capital and technical know-how (Gunatilake at al, 1992; Shanmugarathnam, 1984).

Ownership of productive land, access to it and control over the resources such as water, finance etc. are critical and the most important determinants of economic failure (Gunathileke *et al*, 1993:171,186). These factors have also formed the basis of the agrarian social structure and the source of power held by the rural elite (Gunathileke *et al*, 1993:186). In particular, the control of land has always been a source of power and status in Sri Lankan rural society (Dunham, 1982:50). The acquisition of land (which is a measure of social standing (Paranavithana, 1985:23), has therefore proved to be vital

in consolidating any new positions achieved in the society through upward mobility (Dunham, 1982:50). However, the majority of rural inhabitants are either landless households (Praranavithana, 1985; Bruton *et al*, 1992) or households with uneconomical holdings (Praranavithana, 1985; Schemerhon, 1986), which has resulted in substantial inequalities in the distribution of land in the rural sector (Moor, 1989:184).

As far as the rural sector is concerned, there exists - within a large group of smallholdings - a gradation with few relatively large holdings at the level of family farms. Alongside these owner-cultivators there is a large segment of landless agricultural labour (Gunatileke *et al*, 1992; Paranavithana, 1985; Sanmugarathnam, 1984; Hettige, 1982). The size of the land holding (in general the average size of land holdings remains at two acres, with a very high proportion of holdings below one acre, Gunatilake, 1992) owned by poor peasants is becoming smaller day by day through fragmentation in the process of inheritance of property by family members (Hettige, 1982; Paranawithana, 1984). Those who do not inherit land often become landless wage labourers. Though paddy is the predominant (i.e. staple food) crop in Sri Lanka (Samarathunga and Dissanayake, 1993:89), studies reveal that the rural poorest typically do not own paddy land (e.g. Moor. 1989:188).

As far as the poor peasants (who constitute a substantial share of the rural population) with small plots of lands are concerned, their holdings are uneconomical (i.e. due to their small size) and, therefore, they produce a surplus so small that it is often not enough to settle loans and meet the subsistence requirements (Moor, 1989) of their families. This condition has been further aggravated by the low profitability of paddy

(Weerahewa and Abeygunawardena, 1989) coupled with the high cost of production (which is mostly unbearable for the majority). It could be suggested that the high cost of (crop) production is a result of the introduction of open economic policies. This is through: (a) replacement of exchange labour relations by hired labour forms (Hettige, 1982; Shanmugarathnam, 1984, Moor, 1989) and (b) high input prices caused by the removal of production subsidies.

Cash, which is a fundamental requirement for agricultural production, is usually obtained by most of the peasants either through the sale of the products of their labour and/or sale of their labour for a monied wage. In the case of the majority of farmers, the gap between the cash requirement for production and the consumption and total cash receipts is very high (Shanmugarathnam, 1984). Institutional credit is strictly geared for creditworthy farmers, leaving the bulk of farmers at the mercy of the informal credit sector where annual interest rates are extremely high i.e. about 190-240 percent per annum (Hettige, 1982; Shanmugarathnam, 1984).

The structure of the rural market is also complex and heterogeneous. This is partly because of the character of the specific relationships that link the farmer to the market through intermediaries. This structure differs from product to product. Each system has specific characteristics related to its credit, storage and accumulation of stocks, seasonal availability and timely access to market (Gunatilake *et al*, 1992). All these factors affect the producer prices, as the bargaining power of the household is determined in each case by the characteristics which are specific to the pattern of exchange for a given commodity (Gunatileka *et al*, 1992). Many of the small farmers live in relatively

isolated areas, a considerable distance from improved roads, making the securing of inputs and the selling of their products (e.g. paddy and vegetables) costly and time-consuming (Schermerhon, 1986).

The quantity of marketable surplus that is available in different rural locations also becomes an important factor in the channels of trade and in the organization of markets (which is again determined by the size and productivity of the land). In the rural economy where the surplus is small and economies of scale for trade are not adequate, the systems which evolve between producer and trader leave little room for the growth of competitive markets (Gunatilake *et al*, 1992:190). This is because the low levels of marketable surplus are often incapable of attracting competing buyers (Schermerhon, 1986). In such a setting, rich landowners who also own or control most of the other means of production (through a continuous process of accumulation) are always in a strong position to manipulate the market conditions in their favour (Hettige, 1984:208). Therefore, in a situation marked by the absence of well-developed farmer organizations, the farmers who are capable of producing a marketable surplus - and who have their own means of transport and other necessary resources - are in a favourable position in that they are able to exploit this opportunity to their advantage (Gunatilake *et al*, 1992:191).

The criterion of land size, as a determinant of economic failure has to be applied with caution. For example, in areas with adequate rainfall and the capability of supporting high income agriculture such as the cultivation of vegetables, tubers (e.g. in some areas of the Nuwara Eliya district, where farmers grow most of the temperate vegetables and

potatoes), the size of land holding which enables a household to produce a marketable surplus tends to be smaller (sometimes just one quarter of an acre). On the other hand, the average size of available holdings in some of the poorest dry zone villages is relatively big (2-3 acres). These holdings contain lowland and highland³ areas with a potential to provide high income, but are usually without an adequate supply of water (Gunatileka *et al*, 1992). This indicates that the productivity of the land, which is mainly determined by the availability and access to water, is also a critical determinant of economic failure (Gunathilake, 1992:17).

In such a context, the wealthy landowners - who also control the bulk of the means of production and exchange - have a far greater control over the destinies of the poor peasants who occupy the lower range of the agrarian hierarchy (Hettige, 1984, 206-207). The wealthier farmer, who has either inherited or acquired a better position in the rural power structure, is always in a position to continually influence the majority of disadvantaged poorer farmers by further acquiring the ownership or the control of various resources such as land and labour. This further improves their socio-economic status, which will also help them maintain their suitability for accessing working capital, technical know-how etc. (Shanmugarathnam, 1984). The position of the majority of the farmers who do not own a decent piece of land (i.e. one which is productive, closer to an irrigation supply and road networks etc.) has deteriorated relatively and absolutely (Hettige, 1984, 206-207) so that it is not uncommon for them to face failure and debt.

It is clear then that the economic opportunities which opened up with the introduction of free market policies were not equally accessible to the majority of rural inhabitants. This is

due to the existence of a minority of rich farmers with inherited advantages which prevent the majority of disadvantaged poorer farmers from entering into the market process (refer to section 1.2.2). As has already been indicated above (section 1.2.3), the outcome of the post-1977 policies has been more favorable towards the minority of rich farmers (Gunathilleke *et al*, 1992:175; Karunan, 1992:117; Shanmugarathnam, 1984:24). It is also argued that the lower strata of rural population i.e. that including those who do not produce a large marketable surplus due to the small size of their land, is adversely affected by the liberalization programme (Gunathilake *et al*, 1992:175). Thus it is demonstrated that the outcome of the liberalized policies appear to have had varying results in relation to the size of land holding (Gunathilake *et al*, 1992:186).

This further strengthens the argument that all the economically successful farmers in a given rural location may not be entrepreneurs. There may be poorer farmers with entrepreneurial talents but without an opportunity to utilize them. Indeed, this questions the validity of the label “entrepreneurial farmers” (section 1.2.3), and hence warrants a further investigation into the basic research questions/objectives stated in section 1.2.4.

1.2.6 A Study location in the Accelerated Mahaveli Development Project (AMP) as a means of controlling external variables

Despite the above need, the practical difficulties of applying the previously-noted (Section 1.2.4) research approach to the traditional rural sector of the country still remains. The only possible way of applying this approach is to control the above-noted extraneous variables, so that income-generating activities of the economically successful farmers can be studied and differentiated from those of economically unsuccessful

farmers in order to investigate the influence of economic behaviours on economic success/failure.

This study represents a “unique natural experiment” in which the above approach was successfully adopted by controlling a significant number of relevant external variables. This was through selecting the Accelerated Mahaveli Development Project (AMP) as the primary study site, where inhabitants started from the same socio-economic background (i.e. in an environment free from special privileges or blockages) ten years before the commencement of the study.

AMP is the single most important development project in Sri Lanka, both in economic and political terms. The core objective of the Project has been the settlement of landless farmers from the South West and central areas (Karunan, 1992:120) to the dry zone⁴. Therefore, landlessness and poverty became the criteria for the selection of new settlers (Gunathilake, 1993:188). The settler farming families, under the AMP guidelines at the time of settlement, were granted 2.5 acres of irrigable land (i.e. paddy land) plus a plot of 0.5 acres of unirrigable highland (except for non-farming families⁵). This allocation of equal allotments, together with specific rules and regulations to prevent sale, lease, mortgage or fragmentation by inheritance, according to Siriwardena (1981:2) was seen as a definite step towards removing the major sources of rural inequality. This was also intended to eliminate bigger landlords and to introduce equality among farmers in both the ownership of land and in the sharing of production and profit (Siriwardena, 1981:2). Therefore the AMP was a political device to alter the prevailing agrarian relations, land ownership and mortgage/lease/tenancy arrangements found in the countryside. The

AMP settlements have also been provided with an infrastructure incorporating a good road network (MLIMD, 1989:4) which eliminated disadvantages (in terms of transport facilities) associated with the location of its farms.

As a means of overcoming any difficulties at the initial settlement stage, the AMP ensured that all settlers received dry rations from their arrival and for the first twelve to eighteen months (or until they got their first harvest). They were also given an allowance to build a temporary hut on their homestead allotment. Furthermore, the settlers were also issued with free agricultural implements and seed paddy to enable them to start their cultivation activities. Their land allotment was prepared for cultivation before it was handed over, and cultivation loans were also arranged for their other needs such as farm power, fertilizer and agrichemicals (MLIMD, 1989:69).

The dependency on rainfall for agricultural production has also been reduced in the AMP areas by increasing investment in irrigation facilities, which allows diversification of production and continued cultivation in an environment with almost year-round production potential (Schermerhon, 1986).

Therefore the selection of AMP as the study-site provided an opportunity to examine the entrepreneurial processes of those farmers who, after starting with almost the same basal physical resources and social status, emerged as relatively economically successful farmers over time within an environment where they were no longer subjected to the socio-economic and cultural constraints discussed before (see end note⁶ for a similar argument presented by Scudder in Bandaragoda, 1987:196). This is based on the

assumption that change of socioeconomic status over time must be a product of entrepreneurial abilities.

1.3 The structure of the thesis

The introductory chapter justifies the basic research issues of the study. Subsequently the thesis is divided into three major parts. In the first part, Chapter Two reviews the literature of the entrepreneurial process and its contribution to economic success in general. It argues that entrepreneurship is a process by which the entrepreneur extracts values from the surrounding environment through spotting opportunities and matching them with resources (available or mobilized). Highlighting the limited resource nature of Sri Lankan rural farmers, Chapter Two proposes that economic success (i.e. accumulation of wealth) in this context may be determined by both entrepreneurial and managerial talents. Chapter Three then focuses on the literature relating to the farm/agribusiness management of small-scale Limited Resource Farmers (LRF). The main argument is that the economic success of LRF is determined by their market/environment-orientation (as opposed to production-orientation) and how well successful farmers are able to integrate this with their production and marketing activities. Diversification strategy, as an alternative for LRFs to supplement low returns from primary agriculture, is also examined. This leads to the concept “pluriactivity”, by which is meant a means of survival and/or accumulation of capital. Finally, Chapter Three presents the specific research questions/objectives of the study, combined with a theoretical framework, of “Farmers’ adaptation to the surrounding environment and economic success”.

Part Two (i.e. Chapter Four) reviews research methodology, that is the “multiple embedded case study” used for field work.

Part Three consists of three Chapters. Chapter Five describes and analyzes the case study context, including the general routine socioeconomic processes adopted by economically unsuccessful farmers. Chapter Six analyzes the adaptive value-extraction strategies of economically successful farmers. Two routes for value extraction are proposed i.e. entrepreneurial and managerial. Entrepreneurial value-extraction strategies (i.e. those adopted to expand the boundaries/constraints of managerial demands) and their relation to the exchange of value through social networks are discussed and analysed. Pluriactivity and its relevance for entrepreneurial value extraction is also explained. Subsequently (in Part Three of Chapter Six) the managerial value-extraction strategies adopted (to maximize the extracted value within the given constraints) by successful farmers are examined and presented in detail. Part Four pulls together both the entrepreneurial and the managerial value-extraction strategies, and concludes that managerial function is an integral component of the “entrepreneurial matching process”. Furthermore it is proposed that both these functions play complementary and interdependent roles in the economic success of the rural farmers.

Chapter Seven concludes by reviewing study limitations, raises some of the theoretical, methodological and policy implications of the study, and makes suggestions for further research.

¹Please note that "he" should be taken to indicate "she" as well.

²Anderson (1995) notes that the ultimate criterion of entrepreneurship is economic viability since, according to him, a business must produce income that exceeds the cost incurred in the long term (p302). Reynolds (1991:57) similarly notes that entrepreneurial activity is that which is associated with enhanced economic well-being

³'Low land' refers to the land use for cultivation of paddy which needs plenty of water during the planting and growing seasons whereas 'highland' refers to the land that is used for housing and growing mixed crops.

⁴Sri Lanka consists of three major zones based on the annual rainfall distribution viz. Dry zone, Wet zone and the Intermediate zone - of which the dry zone consists of 2/3rd of the land area with inadequate rainfall for year-round cultivation.

⁵A minimum of 25 percent non-farming families have also been settled in each Mahaveli system. Each of these families has been allocated 0.5 acre of highland on which to build their houses. The main aim of this settlement activity, according to MMD (1980:6), is to facilitate the basic functioning of the rural society through providing services related to non-farm areas.

⁶Scudder argues that settlers may tend to become more entrepreneurial than they had been in their communities of origin due to their moving as individual households into a new environment, where they are no longer subjected to socioeconomic and cultural constraints.

PART ONE

CHAPTER TWO

The Entrepreneurial Activity/Process And Its Influence On Economic Success

2 Introduction

It was argued in the previous chapter that it is more meaningful to focus on the functional approach, i.e. to study the entrepreneurial activity/process so that entrepreneurs could be differentiated from non-entrepreneurs. This was based on the arguments that (a)economic success is determined by the behaviour of the entrepreneur, as it is expected that he behaves in a manner that is likely to increase his economic/business success and (b)the higher the impact and frequency of entrepreneurial activity/process associated with any particular individual (or business entity), the greater that this individual approximates to the construct of the entrepreneur. Chapter One, in the light of the above arguments, justified the basic research objective of this study, i.e. studying the role of entrepreneurial activity/process in the economic success of rural farmers in Sri Lanka. This led to the basic research approach of this thesis viz. (a)to select economically successful farmers in the AMP, (b)to study and compare their processes of income-generating activities with those of economically unsuccessful farmers and (c)to investigate the influence of economic behaviours on economic success/failure. The aim of this chapter is to review relevant theories of entrepreneurship, so that the relationships between entrepreneurial activity/process and subsequent economic success can be explored.

This chapter first suggests that the eventual outcome of the entrepreneurial process is a change which occurs from a lower value situation to a higher value situation

(i.e. demonstrating an accumulation of values). This leads to (a)the argument that the entrepreneurial process can be observed in terms of extracting, re-defining or creating values (both of economic and social value) and (b)the justification of the research i.e. exploring the entrepreneurial processes behind the accumulation of economic values (i.e. wealth). Subsequent discussion introduces two main views of the entrepreneurial process, i.e. accumulating values through (a)changing the conditions in the environment and (b)adapting to the changing conditions in the environment. This is followed by the argument that a better understanding of the entrepreneurial process could only be obtained by taking into account the environmental context. Subsequent discussion of the chapter will focus on the aspects of entrepreneurial process and its relationship to “opportunity”, “resources” and related factors towards achieving economic growth. By emphasising the limited resource nature of Sri Lankan rural farmers, the chapter next argues that economic success in a limited resource context could be achieved by combining both entrepreneurial and managerial functions. This is followed by the argument that the existence of poor managers (in a limited resource context) are of vital importance for the survival and the subsequent economic success of the entrepreneurs since they could co-ordinate misallocated resources for their own and society’s benefit.

2.1 Entrepreneurial function and change

Much of the literature suggest that the final outcome of the entrepreneurial function is “the change” (Anderson, 1995; Barth, 1963, Morris *et al*, 1994; Mitton, 1989), yet the focus of this thesis is on “the process that leads to these changes” and not the changes themselves. The practical approach this research adopts in order to study these processes is (a)first to identify the changes (influenced by these processes) and

(b)then to investigate the nature of the processes behind such changes. The uniqueness of the study site therefore lends strength to this research because of the quasi-experimental situation; each of the respondents started from approximately the same socio-economic position. Therefore the changes can be pinpointed and the entrepreneurial processes behind such changes could be studied in detail.

These changes - which have taken place from a lower value situation to a higher value situation (Anderson, 1995:294) - have been identified as of both economic (i.e. wealth) as well as of social value (Anderson, 1995; Morris *et al*, 1994). The available literature reveals that the entrepreneurial processes may be in the form of (a)the extraction of values from the surrounding environment (Anderson, 1995:297; Scott and Anderson, 1994; Scott *et al*, 1997), (b) he generation of new standards of values and/or re-definition of existing ones (Barth, 1963) or (c)the creation of new values (Anderson, 1995; Mitton, 1989:18, Morris *et al*, 1994; Scott and Anderson, 1994). It may therefore be argued that the changes influenced by entrepreneurial processes are detectable in the form of the accumulation of values. It has been argued that the ultimate result of entrepreneurship is economic well-being (see section 1.2.2). Therefore, as indicated before, the main focus of this thesis is on the processes behind the accumulation of economic values (i.e. the creation, retention and accumulation of wealth).

2.2 Entrepreneurial process: achieving change through changing the environment versus adapting to changes in the environment

The next important issue to be addressed in this discussion is how economic success (i.e. change from a lower economic value situation to a higher value situation) is

achieved or what is the nature of the entrepreneurial processes behind such achievements. There are two distinct views i.e. achieving economic change (a) through changing the conditions in the surrounding environment and/or (b) through adapting to the changes in the surrounding environment.

The pioneer of the first view is Schumpeter, a major authority on entrepreneurship in the 20th Century. According to Schumpeter (1934) the entrepreneurial process represents innovative (i.e. by being first in the market), new or hitherto untried combinations of products, services, production processes, markets and organisations (which we call “enterprise”) that drastically change the point of market equilibrium. In this way extraction of value is taken place in the form of increased income (or economic rent). This is through shifting the demand function. Schumpeter terms the entrepreneur - the person who carries out these combinations - as the “creative destructor” who, according to him, creates new wealth through the process of destroying the existing market structures. Schumpeter’s entrepreneurs produce the change by changing the patterns of factor allocation rather than responding to a requirement for that reallocation (Vale and Binks, 1990:6). Schumpeter (1934:78) also argues that it is rare for anyone to carry out new combinations throughout his active life. Therefore, the economic change achieved through creative destruction is a discrete one as opposed to a gradual change or evolution (Vale and Binks, 1990:6).

Wortman applies Shumpeter’s view to “rural agricultural entrepreneurship”. According to Wortman’s (1990a:22;1990b:330) definition, rural entrepreneurial processes could be observed in the forms of the “creation of a new organisation that

introduces a new product, serves or creates a new market, or utilises a new technology in a rural environment". He elaborates on these in terms of the following example:

"rural entrepreneurship could include new organisations that: (a) introduce a new product from an agricultural produce (e.g. the utilisation of corn starch in biodegradable plastic); (b) serves or creates a new market (e.g. bacteria which retard spoilage in silage soils, or which prevent frost injury to cold sensitive crop - this is, essentially, a new product); and (c) utilises a new technology (e.g. uses of bacteria-instead of pesticides, to protect the plant against insects/developing genetically engineered crops which are tolerant to certain herbicides)" (Wortman, 1990a; 1990b).

The second view argues that the entrepreneurial process is an adaptive evolutionary one (Etzioni, 1987; Gasse, 1985:51), in that adaptation is achieved by the accumulation of small adjustments (Etzioni, 1987:178). This complies with the arguments presented by Hannan and Freeman (1977), i.e. those (entrepreneurial) organisations that are well adapted to their environment will survive, and those that are not will die. The essence of this contention according to Low and MacMillan (1988:144) is that chance variations in organisational forms that are adaptive are selected for, whereas non-adaptive forms are deselected.

This process, according to Gasse (1985:51), also underlines the adaptive nature of the managerial process - with connotations of enterprise, opportunism, individuality, and intuition. This contrasts with the terms 'manager' and 'administrator', which are associated with the notions of organisation, professionalism, rationality and predictive management process in the small business. In a similar line of argument, Ohlmer *et al.* (1993:9) contend that (agricultural) entrepreneurial behaviour is a result of strategic decision-making, which may involve adaptation of the business that has long-term effects (p8). Similarly Kuhl and Kuhl (1990:119) argue that the

(agricultural) entrepreneurial process represents the adaptation of the business in terms of various strategies to changing (economic) circumstances in the environment. Bryant (1989:338-339), by researching into entrepreneurial adaptation in the agricultural context, concludes that entrepreneurial adaptation is a pro-active behaviour that involves searching out or identifying new opportunities which introduce more fundamental changes to existing farms i.e. the development of entirely novel enterprises - techniques and/or product and service orientations that are either new to the individual or community.

These arguments support the views of Carland *et al.* (1984:357,58) and Beckford (1993) that an entrepreneurial venture can be identified by the (innovative) strategic behaviour of the business. Low and MacMillan (1988) denote this process as “strategic adaptation” (pp 142-144). The applicability of these two views to the Sri Lankan rural farming context is yet to be empirically investigated.

2.3 Need for studying the entrepreneurial activity/process in its environmental context

It may be argued that the entrepreneurial process (whether adaptive or not) cannot be taken in isolation from the environment (i.e. “the decision/business context”) of the entrepreneur (Beckford, 1993:122; Chell *et al.*, 1991:68; Scott and Anderson, 1994; Kodithuwakku, 1996:41; Morris *et al.*, 1994; Scott *et al.*, 1997). This argument has been supported by various scholars, as they suggest that there is growing evidence of the interactions between the individual entrepreneur and the environment (Anderson, 1995:134, Chell, 1990:184; Shaver and Scott, 1991:25). This is because the pursuit of a set of actions by an individual may be entirely logical to that particular

individual's perception (i.e. the perceived stimuli) of the encapsulating context (Anderson, 1995:301; Binks and Vale, 1990: 57; Hirsch *et al*, 1990:4; Stevenson and Jarillo, 1990:23). Furthermore, this may vary for different individuals (Beckford, 1993:122) or for the same individual over time (Stevenson and Jarillo, 1990:23) and/or in different locations (Bryant, 1989), leading to different forms of entrepreneurial processes (Morris, *et al*, 1994; Scott, *et al*, 1997) and depending on different socio-economic circumstances (for instance rural versus urban locations). Much of the literature therefore suggest that meaningful research in this area must adopt a more contextual focus (Anderson, 1995:134,301; Beckford, 1993; Bryant,1989; Chell, 1990:190,194; Chell *et al*,1991:3-68; Hirsch *et al*, 1990:4; Low and MacMillan,1988; Morris *et al*, 1994).

2.3.1 Entrepreneurial process and the social context

"Focusing on the entrepreneur as an individual outside a social context will only lead, as it has led economists, into blind alleys" (Frankenberg, 1967:58)

The importance of taking into account the interactions between the entrepreneur and his social context has been pointed out by various scholars (Chell *et al* 1991:3; Anderson, 1995:293; Aldrich and Zimmer ,1985; Larson and Starr, 1993). They support the argument that the entrepreneurial process, which bridges the single operating (business) unit with the wider society (Cole,1959:29; Broehl, 1978:1), takes on meaning only in the context of the broader social process. In this setting, Aldrich and Zimmer (1985:4) argue that entrepreneurship is embedded in the social context, channelled and facilitated, or constrained by people in a social network (p.4).

2.4 Environmental constraints and the entrepreneurial process

Bruno and Tyebjee (1982) propose the need for a theoretical framework whereby the impact of various environmental factors on the entrepreneurial process could be systematically investigated. Chell (1990:186-190), referring to rural entrepreneurship (which is the subject area of this thesis), summarises such key environmental factors as: the location of the business, resource availability, environmental maturity, the cost of doing business, and the dynamism, heterogeneity and hostility of the environment. She further argues that these factors are influential at all stages of business development in terms of imposing constraints (i.e. inhibiting factors) and generating opportunities which, if capitalised upon, enhance the growth of business. According to Chell, the main environmentally-based reasons for business (and hence economic) failure are (a) resource availability, (b) the cost of doing business and (c) too much dependence on a limited customer base (p 193). If we adopt the argument that the entrepreneur is almost a specialist at accommodating the unexpected and overcoming problems/constraints (see Vale and Binks, 1990:5; Vyakarnan, 1990:ix), it follows therefore that the greater the environmental constraints the greater the possibility of observing entrepreneurial processes.

2.4.1 Entrepreneurial process, opportunities and resources

Much of the available literature suggests that a successful entrepreneurial process includes activities related to perceiving opportunities and developing and executing effective strategies to capitalise upon them through assembling resources (see Bygrave, 1994:2; Grasley, 1987; Kodithuwakku and Scott, 1996; Low and MacMillan, 1988: 142-144;). Without an opportunity, or absence of the key

resources, the entrepreneurial process is likely to result in failure, “with little in the way of positive outcomes” (Morris *et al*, 1994). The following figure depicts some of the writings on entrepreneurship and its relationship to opportunities (see figure 2.1).

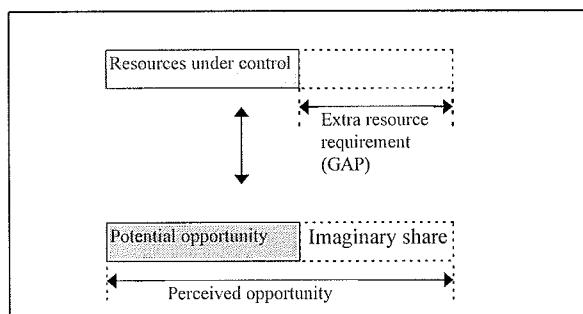
Figure 2.1: Entrepreneurship and its relationship to opportunities

| Author | Relevant citation |
|-------------------------------|--|
| Bygrave (1994:2) | an entrepreneur is someone who perceives an opportunity and creates an organisation to pursue it. |
| Chell (1990:190) | an entrepreneur's abilities are likely to include being innovative and the ability to capitalise upon opportunities. |
| Glade (1967:251) | an entrepreneur is concerned with both the perception and existence of an opportunity (i.e. structure of differential advantage in the capacity of the system's participants to perceive and act upon) combined with the availability of resources. |
| Grasley (1987) | an entrepreneur is a decision-maker who can identify an opportunity, assembles the necessary factors of production and resources, and transforms an idea into a marketable product or service. |
| Kirzner (1979) | an entrepreneur is someone who is especially alert to opportunities as yet overlooked in the market. |
| Kirzner (1984:52) | entrepreneurship is concerned with discovery of an opportunity for pure gain, which is central to the entrepreneurial activities of arbitrage, speculation and innovation. |
| Peterson (1985) | entrepreneurship is the identification and exploitation of opportunities. |
| Powell and Bimmerle (1980:33) | entrepreneurship represents a melding of an individual with an opportunity towards a creation of new enterprise. |
| Leibenstein (1968:74) | entrepreneurs have the capacity to search and discover economic opportunities and to evaluate them. |
| Saylor (1987:59-68) | an entrepreneur looks for an opportunity and ways to capitalise on it, determines what resources are needed and how to get them, identifies the best structure for action, and takes aggressive and innovative actions to capitalise on opportunities. |
| Shackle (1979:26) | an entrepreneur creates opportunities which were not there until imagined by the entrepreneur. |
| Timmons (1994) | an entrepreneur is concerned with recognising an opportunity ¹ buried in often contradictory data, signals, and inevitable noises and chaos of the market place. The more imperfect the market is, the greater the gaps, asymmetries, and inconsistencies in knowledge and information, the more abundant the opportunities to be capitalised by the entrepreneur. For an entrepreneur, timing can be every thing (p34) as opportunities exist, or are created, in real time and have what is called a window of opportunity (p41). |

It follows, from the above citations, that the entrepreneurial process involves functions, activities and actions associated with perceiving opportunities (which may also have been identified by others- Birley and Muzyka, 1997: ix) and capitalising upon them (Bygrave, 1994).

If we adopt the previous argument i.e. the entrepreneurial process causes a change from a lower value situation to a higher value situation (section 2.1), it may be argued that the term “opportunity” represents “a perceived bundle of unrealised values”. It may also be argued that ‘opportunity’ is a relative term, the existence of which is primarily determined by the resource status of the entrepreneur (Bryant 1989:340; Stevenson and Jarillo, 1990:23). A perceived opportunity may not be a potential (i.e. pursuable) opportunity if the entrepreneur does not have the required volume of resources (physical or otherwise) to capitalise upon it. This follows that capitalisation of opportunities (and the resultant economic growth through extraction and/or creation of values) is limited by the scarcity of resources (i.e. in terms of reducing the set of perceived opportunities into a set of potential opportunities). This can be illustrated by the following figure 2.2.

Figure 2.2: Perceived opportunity vs. potential opportunity



This argument seems to be highly relevant to this thesis, because the current study is concerned with small-scale limited resource farmers (LRFs). Limited (scarce) resources and their relevance to entrepreneurship have been discussed by several researchers (see Bryant, 1989; Bygrave, 1994; Hart *et al*, 1995; Kirzner, 1984; Morris *et al*, 1994; Saylor, 1987; Stevenson and Jarillo, 1990). Bryant (1989) argues

that entrepreneurs are characteristically people who go beyond the limits of resources over which they have direct control. The same point has been made by Bygrave (1994). He contends that entrepreneurs find ways of controlling critical resources without owning them (p 18). Similarly Saylor (1987:59) points out that entrepreneurs are creative with limited resources. According to Saylor, ownership of resources is not a mandatory requirement for entrepreneurs for using them. Sexton and Bowman-Upton (1991) also contends that entrepreneurial growth is not constrained by the resources currently under control. These also seem to comply with Kirzner's (1973) argument that ownership of capital is not necessary to provoke its movement or change of application (in Vale and Binks, 1990:5). The following arguments capture the essence of the points made so far.

Entrepreneurship is a process by which individuals pursue opportunities without regard to the resources they currently control. The essence of entrepreneurship is the willingness to pursue opportunities, regardless of resources under control (Hart et al, 1995:86; Stevenson and Jarillo, 1990:23; Stevenson et al, 1989; Stevenson, 1997:9).

2.4.2 Economic growth and entrepreneurial discovery of opportunities

Kirzner (1984: 44) points out that (a) limited resources, (b) lack of technological knowledge to properly utilise available resources and, (c) ignorance of the availability of resources and/or technical knowledge are the main factors of retardation of economic growth (in terms of decreased output). According to him economic growth could be achieved (via expanded volume of output possibilities) through (a) the expansion of resources (b) growth in technological knowledge or (c) increased awareness of the availability of resources (p.45). In all these cases, he contends, that

economic growth is achieved as a result of expanded opportunities i.e. increased volume of opportunities leading to increased output. Kirzner (1984), brings the interrelationship between resources and opportunities (above figure 2.2) to our attention in the following way:

“for where development occurs as a result of increased awareness of the availability of resources, it occurs not because of the availability of new resources, but because of the expanded awareness of existing opportunities” (p 45).

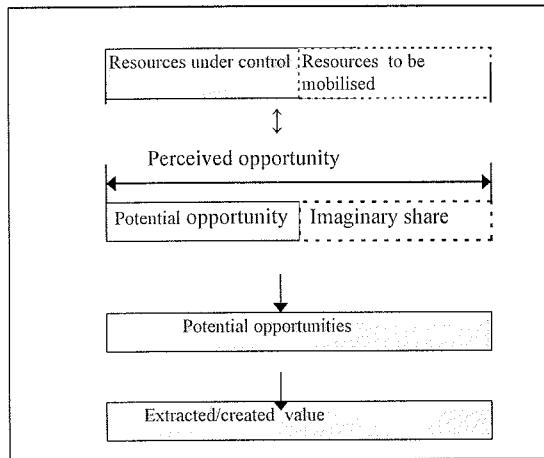
He terms this process as the “entrepreneurial discovery” of existing opportunities (i.e. entrepreneurial process whereby opportunities that hitherto existed but were unseen become opportunities seen and exploited) and argues that this is important in the understanding of economic growth along two dimensions (p 45) viz.

- (a) output at a given point in time may be less than possible and desired because opportunities remained unnoticed. Entrepreneurial discovery of these opportunities makes possible a growth in output (p45).
- (b) expansion of resources (physical or otherwise) with time leads to expansion of the range of productive possibilities. For this to be translated into growth in output, it is not enough that these expanded possibilities exist; they must also be perceived. Here, too, entrepreneurial discovery is an indispensable ingredient in economic development (p45).

Consequently Kirzner points out that there are two avenues (which operate in an intertwined manner) to achieve economic growth viz. (a) through expansion of opportunities arising through increased availability of resources and (b) the discovery of hitherto unperceived opportunities (47,48), again leading to the expansion of resources which in turn result in the above process (a). This further justifies the previous argument (see section 2.4.1) that the availability of resources is the limiting factor of economic growth.

Given the points made so far, it may be argued that the process of entrepreneurial value extraction includes (a) perceiving opportunities and (b) capitalising upon them through “matching” with resources (Kodithuwakku and Scott, 1996; Scott, *et al*, 1997). By the term “matching” the researcher implies a process of perceiving opportunities (in other words noticing the availability of bundles of unrealised values) and extracting value through translating them into a set of potential opportunities (i.e. pursuable) via mobilising extra resources (if the potential opportunity < perceived opportunity). This process, whilst complying with the arguments made in section 2.4.1 that the entrepreneurial process can be seen as “pursuing opportunities without regard to the resources the entrepreneur currently control”, also represents the ability of the entrepreneur to imagine and his willingness to pursue those opportunities unconstrained by concerns about resources currently controlled/owned (Hart *et al*, 199576; Stevenson and Jarillo, 1991). This phenomenon is schematically presented in figure 2.3.

Figure 2.3: The matching process



As far as the individual entrepreneur is concerned, it may be argued that this process includes both the discovery of hitherto unperceived opportunities as well as the creation of new opportunities (Shackle ,1979:26), leading to the expansion of the set of total potential opportunities which could in turn be capitalised upon. Here the basic argument is that “the created share of the opportunity” (i.e. the proportion imagined by the entrepreneur) is proportionate to the volume of mobilised resources which represents the entrepreneurial drive to achieve business/economic growth. If we adopt the previously introduced concept of “opportunity” as “a perceived bundle of unrealised values”, creation of opportunities in turn represents creation of values. The eventual result of this process is the creation of wealth, which could then be accumulated or consumed.

2.4.3 Limited resources, resource mobilisation and social networks

“Entrepreneurship is embedded in a shifting network of continuing social relations that facilitate and constrain linkages between aspiring entrepreneurs, opportunities and resources” (Aldrich and Zimmer, 1986: 8-9).

The need for the mobilisation of resources (i.e. as an essential part of the above matching process) brings about the need for taking into account the interactions between the entrepreneur and his social context (see section 2.3.1). Johannisson (1988:98) points out that the entrepreneur is a networking person, and argues that the personal network is the vehicle by which the established entrepreneur exchanges information with whilst he acquires resources from the environment (p 83). This complies with the argument presented by Johannisson and Peterson (1984) that the personal network, which also incorporates elements of trusts (Arrow, 1974; Bhide and Stevenson, 1990; Granovetter, 1985; Hart *et al*, 1995:77), is the most valuable asset for an entrepreneur.

The validity of these arguments has been proved by Starr and MacMillan (1990) as they demonstrated that entrepreneurs - when confronted with an absence of resources - use social capital to obtain needed resources and also to reduce the cost. The use of informal social networks for assembling resources during the business start-up processes has also been illustrated by Birley (1985). These findings support the arguments presented by Stevenson and Jarillo (1990:25) that organisations which facilitate the emergence of informal internal and external social networks - and allow the gradual allocation and sharing of resources - exhibit a higher degree of entrepreneurial behaviour. Similarly McGrath (1996), by referring to "entrepreneurial wealth creation" and the "principle of asset parsimony", suggests that the entrepreneur possessing valuable social capital in the form of an extensive or powerful network is likely to enjoy a greater success.

2.5 Economic growth, entrepreneurial process and the need for efficient resource allocation (i.e. management)

Achieving economic growth calls for a steady increase of the total volume of resources, which in turn calls for qualities of an entrepreneurial character (Kirzner,1984: 48,49). This warrants a further discussion on the subject of limited resources and its bearing on the entrepreneurial process and economic growth.

Kirzner (1984) contends that economic growth, in a world of a given volume of resources, will necessarily arise from an efficient² inter-temporal allocation of resources (p49). This, according to him, strictly depends on the rate at which consumption enjoyments are postponed to permit capital resources to be built up (p 49). Manchin and Szelenyi (1985:255) also make a similar point. By adopting a “Weberian culturalist explanation”, they suggest that “delayed consumption” - in the absence of inherited wealth - is an important element in the process of accumulating wealth.

Consequently Kirzner (1984:50,54) argues that the process of short-run resource allocation is anything but a special case of the more general discovery (or entrepreneurial) process. If we denote the efficient allocation of resources as “management” (Baumol,1968³; Giles, 1990:66; King and Sonka, 1985:2; Jones, 1990:39), this brings about the interdependent and complementary nature of both entrepreneurial and managerial processes in achieving economic growth (especially under the condition of limited resources).

There is a body of literature to suggest the complementary nature of both entrepreneurial and managerial functions, as it argues that the entrepreneurial process cannot be isolated from other business processes (Gasse, 1985; Jacobson, 1986:260; Schumpeter, 1934:77). Gasse (1985:53) notes that any “business process” is a continuous spectrum of activities ranging from entrepreneurial to managerial elements. As also was argued before, these two elements - according to Gasse (1985:51) - are complementary (rather than mutually exclusive), both within an organisation and - in many cases - within a particular role or activity. However, there is hardly any empirical evidence to show how these two processes complement each other in the total business process (and, therefore, the applicability of it is yet to be empirically validated).

Olson (1987:10) argues that growth-oriented entrepreneurial firms (after surviving the tumultuous start-up phase) must focus on efficiency-related operations in order to remain successful. Pointing out that an entrepreneur sometimes can act as both the “start-up phase creator” and the “growth-phase manager”, he argues that most entrepreneurs do not have the aptitude to handle the managerial functions - which are of crucial importance when a firm enters the growth phase (1987:13). This highlights the need for putting together a management team and subsequent delegation of authority to team members. Similarly Morris *et al* (1994), referring to established firms, also suggest that both the entrepreneurial and the managerial functions are necessary to achieve/maintain success. They stress that it is important, regardless of the specific outcomes desired i.e. profit and/or growth, for managers to have a clear

understanding of the potential strategic benefits of the outcomes of their entrepreneurial process.

Stevenson (1997:10,14) defines entrepreneurship as a “spectrum” of managerial behaviour, one that can be applied both in start-up stages as well as within more established businesses. This spectrum, according to him, lies between two extreme points i.e. the ‘promoter’ (who capitalise upon opportunities regardless of the resources under current control) and the ‘trustee’ (who emphasises on the efficient utilisation of existing resources) (p.10). He designates the range of managerial behaviour that lies between these two extremes (i.e. overlapping portions) as “entrepreneurial and administrative behaviour” or entrepreneurial management (p.10). This, according to Stevenson, is a function of several pressures such as the need for co-ordinating key non-controlled resources (p.13). He further argues that ,although the managerial task is substantially different from that of entrepreneurial tasks, management skills are nonetheless essential (p.13).

It follows that economic success with only limited resources setting should be determined by an individual’s ability to be entrepreneurial (i.e. perceiving, creating opportunities and extracting values through translating them into a set of potential opportunities via mobilising resources) as well as managerial (i.e. deploying/ allocating the available each unit of resources to its most highly-valued use to avoid waste (Kirzner, 1984:46,48). It may be argued in this setting that the previously-discussed “matching process” (refer to figure 2.3 for example) should include both

entrepreneurial as well as managerial elements. The applicability of this argument to Sri Lankan rural farming context is yet to be empirically validated.

2.6 Misallocation of resources leading to the creation of entrepreneurial opportunities

Casson (1982:23) identifies the entrepreneurial process as the co-ordination of misallocated scarce resources. Without the entrepreneur, he argues, wrong decisions are made and hence resources are not allocated as efficiently as they might be. As a result, opportunities are created for entrepreneurs (p.57) for co-ordination (i.e. beneficial re-allocation of resources - p.25). According to Casson, the existence of uncertainty⁴ also creates opportunities (p.67). These opportunities, he argues, can be exploited by entrepreneurs by putting the misallocated resource to a better use after taking control over them (pp 57,58). An entrepreneur who is involved in the process of co-ordination, according to Casson, can be (a) a producer⁵ (pp58,59), (b) an employer⁶ (p.59) and (c) a middleman⁷ (pp60,65). In each of these cases he demonstrates how the entrepreneur's superior judgement enables him/her to identify an opportunity for co-ordination which he/she exploits through intermediation (p.66).

He identifies two major aspects of co-ordination i.e. private and social (p.41). Private co-ordination, according to him, occurs when the individual concerned is made better off as a result of the reallocation of resources. Social co-ordination, by contrast, occurs when someone is made better off without anyone else being worse off (p.41). One key issue of studying entrepreneurship, he points out, is the extent to which the pursuit of private co-ordination indirectly lead to social co-ordination (p.41). He

argues that entrepreneurs, though their activities may indirectly lead to social co-ordination, are motivated by private co-ordination (p.59). This co-ordination, according to him, can be general (i.e. analysis considers co-ordination within the context of the economy as a whole), or partial (i.e. co-ordination in the context of part of the economy) (p.41).

Casson identifies four key elements for any co-ordination problem:

- (a) individual preferences - each individual's preferences are assumed to be defined consistently by his own consumption of goods and services (p.43).
- (b) resources - anything with the ability to generate, directly or indirectly, something for which one or more individuals has a preference (p.43).
- (c) state of the nature - any aspect of the environment relevant to the productivity of resources, or with direct consequences for individual preferences (p.43).
- (d) state of technical know-how - what options are available for controlling the environment (p.43).

By putting the above key elements in to context, Casson puts forward some practical examples of strategies for co-ordination viz.; (a) co-ordination through control (i.e. different production strategies adopted by farmers depending on the state of weather) (p.44), (b) co-ordination through team work (pp 44,45), and (c) co-ordination through exchange (p.47).

As far as the above discussion is concerned, it can be argued that the existence of poor managers (in a limited resource context) is useful for achieving economic growth.

This is because entrepreneurs can overcome the constraint of limited resources as they can co-ordinate/mobilise the misallocated resources.

2.7 Summary and conclusions

This chapter first argued that the eventual outcome of the entrepreneurial process is a change which occurs from a lower value situation to a higher value situation (i.e. accumulation of values). This led to the argument that the entrepreneurial process could be observed in terms of extracting, re-defining or creating values (both of economic and social value). Subsequent discussion introduced two main views of the entrepreneurial process, i.e. accumulating values (i.e. wealth) through (a) changing the conditions in the environment and (b) adapting to the changing conditions in the environment.

This was followed by the argument that a better understanding of the entrepreneurial process could only be obtained by taking into account the environmental context. Subsequent discussion of the chapter focused on the aspects of the entrepreneurial process and its relationship to “opportunity”, “resources” and related factors towards achieving economic growth. It took the view that opportunity (i.e. perceived bundle of unrealised values) is a relative term, the existence of which is determined by the resource availability. This was followed by the contention that the process of entrepreneurial value extraction consists of (a) perceiving opportunities and (b) capitalising them through “matching” with resources. This term “matching” underlined the argument that the entrepreneurial process could be seen as “pursuing opportunities without regard to the resources the entrepreneur currently control”.

By emphasising the limited resource nature of the Sri Lankan rural farmers, the chapter next argued that economic success in a limited resource context could be achieved by combining both entrepreneurial and managerial functions. This was followed by the argument that the existence of poor managers are of vital importance for the survival and the subsequent economic success of entrepreneurs as they, can overcome the constraint of limited resources through co-ordinating (mobilising) the misallocated resources.

Having reviewed the entrepreneurial process and its relationship to economic success, the next chapter will focus on the managerial function of the limited resource farmer and its relationship to survival/economic success.

¹Timmons (1994) emphasises that opportunities (to be seized by entrepreneurs) are created as a result of changing circumstances, inconsistencies, chaos, lags or leads, information gaps and a variety of other vacuums in the market which can be recognised by entrepreneurs in order to take advantages of these imperfections (p34).

²To use existing resources efficiently called for deploying these resources to avoid waste (Kirzner, 1984).

³If we adopt the definitions given by Baumol (1968), management is to do with the overseeing of the ongoing efficiency of continuing process. Therefore it is the manager's task to see that available processes and techniques are combined in proportion (p 64). Entrepreneurship according to the same author(p 65) is to do with locating new and innovative ideas and putting them into effect(whether or not the manager in fact also doubles as an entrepreneur).

⁴Uncertainty relates to states of the world which cannot be influenced by individuals (p.67). Uncertainty is relevant to an individual in so far as the outcome affects his/her welfare. Furthermore when uncertainty is relevant the individual is said to be exposed to risk (p.67).

⁵Casson argues that non-entrepreneurs are incapable of perceiving an opportunity due to their (a) failure to predict(for example the

correct weather) (b) failure to control (i.e. adapting to weather conditions or to control weather) and (c) lack of imagination (i.e. failure to realise that he can gain an extra income by changing the time of harvesting). In each of these case Casson's entrepreneur perceives an opportunity for co-ordination (p.58).

⁶Exploitation of team economics in production. Here the entrepreneurial intervention in co-ordination of team-work gives a synergetic effect as opposed to work in isolation (p.59).

⁷Co-ordination through exchange. In this case entrepreneur acts as a third party to two other parties with different consumption claims to be allocated (p.60).

CHAPTER THREE

Limited Resource Farmers: Their Survival And Success

3 Introduction

It was argued in the previous chapter that (a)any business process is a continuous spectrum of activities ranging from entrepreneurial to managerial elements and (b)these two processes are complementary and so may not be isolated from each other. It follows that achieving economic success in a limited resource setting may call for both entrepreneurial and managerial functions.

It may be argued, in this context, that it is not feasible to obtain a complete understanding of the above phenomenon without first getting a clearer view of what farm/agribusiness management literature has to say about the economic success of farmers. The main aim of this chapter, therefore, is to delineate the relevant explanations of farming success provided by the agribusiness/farm management and related literature.

This chapter consists of two parts. Part One first argues that the “system view” of farming is the appropriate approach to investigate the broader research issues in hand (i.e. economic success of farmers). This is because it views the rural household or production and consumption unit in a comprehensive manner, and recognises the interdependencies and dynamic interrelationships between the farm unit and its unique surrounding environment in an interdisciplinary manner.

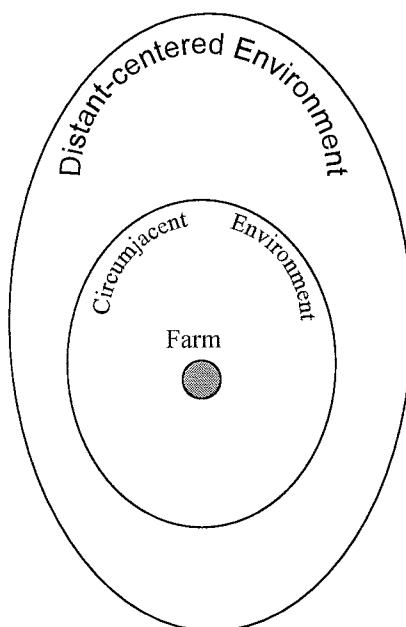
Part One then recognises farm management as a process of adapting to the surrounding environment through the efficient allocation of resources. It next takes into account the basic characteristics of Limited Resource Farmers (LRFs) and their limitations for adapting to the environment, and argues that LRFs benefit only from adopting integrated production and marketing strategies (i.e. market orientation). Part one finally argues that LRFs could also benefit from diversifying into other (both farm-related and non-farming) areas in which they have more control over price. This leads to the introduction of the term “pluriactivity” as a potential means of achieving economic success. Subsequently Part 3.2 develops specific research questions, objectives and a conceptual framework of the macro issue “farmers’ adaptation to the surrounding environment and economic success”.

3.1.1 The system view of farming as the basic research strategy to study the economic success of farmers

There is a body of literature to suggest that meaningful studies on the economic success of farmers should adopt the farming system approach (Cornman *et al*, 1982; Wossink, 1990). According to Cornman *et al* (1982:223), the farming system approach views the farm or production unit and the rural household (or consumption unit) in a comprehensive manner and recognises the interdependencies and interrelationships between the natural and human environments. The same authors point out that this approach explicitly recognizes farmer goals¹, and seeks to include community and societal goals too. Cornman *et al* (1982:223) further indicate that research and education are needed to integrate all physical , biological and marketing knowledge into a comprehensive model that includes the trade-offs between farm and off-farm use of the family's² resources. According to them, the system approach is a “practical problem solving research strategy” that cuts across disciplinary boundaries to wed biological, physical and social sciences into a meaningful body of knowledge (p.223).

This approach takes the view that the farm - immaterial of its scale or orientation - is embedded in the hierarchy of the environment within which it operates (Olmstead, 1970:32; Wossink, 1990:56; Bryant, 1989). The environment is of two major layers i.e. (a)a circumjacent environment and (b)a distant centered environment (Olmstead, 1970), these being collectively termed as “the farmers’ enabling environment” (Bryant, 1989) (see Figure 3.1).

Figure 3.1: Farmers' enabling environment



Adopted from Olmstead, 1970

The farm, in this approach, is best described as an input-output system - as opposed to the conventional view of the farm as a production unit (Wossink, 1990:56) - in that there is a flow of energy, information, labour and capital in various forms across the farm boundaries to and from the surrounding environment (Bryant, 1984: 310; Olmstead, 1970:39). This approach takes the position that relationships between the individual production unit and its environment are functional and dynamic (Olmstead, 1970:35).

3.1.2 System view and the farmers' enabling environment

The farm/agribusiness environment has some unique characteristics compared to other forms of businesses, as it is massively influenced by surrounding circumjacent environmental factors (Olmstead, 1970). These include, for example, natural environmental factors such as climate (e.g. rainfall, temperature) and biology (pests

and diseases) as well as the perishable nature of products (Beierlein *et al*, 1989, King and Sonka, 1985:3; Smidts, 1990; Sonka and Hudson, 1989). These factors directly affect the production processes, causing variability. Furthermore, changes in climatic factors cause seasonality in agricultural production activities. This seasonality of production activities (Downey and Erikson, 1987) causes the fluctuations of (a)market prices for both inputs and outputs (Simidts, 1990) and (b)demand for labour (Gasson and Errington, 1993: 14-15) - thus precipitating uncertainties which are unpredictable and beyond the control of the farmer.

Each farmer is also in a sense encapsulated within his/her society, and thus there exists a continuous and complex processes of interactions between each individual and his/her society (Jones, 1990:41). The social environment, on the one hand, allows and guarantees the extent of individual freedom or autonomy of action and, on the other, places limits upon it (Jones, 1990:41). The advisory and support services and their activities can be taken as the other main circumjacent environmental factors.

This sector is also heavily influenced by distant-centered environmental factors (Olmstead, 1970) such as technological changes, changes in government policies and institutional factors (Beierlein *et al*, 1989; Downey and Erikson, 1987; King and Sonka, 1985:3; Sonka and Hudson, 1989) which also cause a great deal of uncertainty for farmers.

3.1.3 Changes in the environment create opportunities and constraints

The causes of rapid change and instability of the above environmental factors are numerous and often interrelated (Harling and Quil, 1990:425; King and Sonka, 1985). The broader environmental systems and their driving forces, while imposing constraints (Bryant, 1889:338; Meulenberg, 1986:304; Schwab *et al*, 1989:151), and modifying relationships involving individual decision-taking units in the communities, also influence and create opportunities (Bryant, 1989:338-40; White, 1989:20). The density of these constraints and opportunities, according to Bryant (1989:340), can be known or unknown - and also be expected to vary geographically as well as by sector.

On the other hand there are environments that cushion individual decision-makers from stressful situations. For example, there are certain types and levels of support services, subsidies, and import quotas. These can all have protective effects on the production systems. In such environments (for example during the pre-1977 economic policy regime in Sri Lanka) little need is felt by farmers to experiment and to be innovative, owing to very limited incentives for farmers to alter their decisions from traditional paths (Bryant, 1989:346).

3.1.4 Economic success, management of the farm business and the need for adaptation

By adopting the system view of farming, Olmstead (1970:35) argues that, in order to survive and prosper, the farm operator must design and occasionally modify his own production unit so as to fit into the constraints and opportunities (Gasson and

Errington, 1993:27; Giles, 1990:65; Olmstead, 1970:35) in the surrounding environment. Similarly, a number of authors have argued that survival and the subsequent success of the farm is determined by its adaptability to changing conditions in the surrounding environment (Bryant, 1989:338; Janssens and Krikke, 1990:73; Jonston and Bryant, 1987:17). This may be (a)a positive adaptation³, in which adjustments are made with the intention of improving the farm's economic prospects and its likelihood of continuation and (b)a negative adaptation, made with the ultimate intention of dissolving the farming business (Johnston and Bryant, 1987:12).

This, according to Bryant (1989:338, 339), may involve a management process⁴ (acting in a management mode) that works primarily within the context of what the decision-taker already has experience of (i.e. production techniques, production-lines and markets). This process represents choices which are made in terms of combinations of factors of production (i.e. land, labour, capital, own managerial skills) to recognise the changes involved in relative input costs or modification of the mix of products or services that are already being offered (Bryant, 1989) .

The “issue of choice” constitutes the foundation of the turbulent economic environment (Westgren *et al*, 1988:26) within which farmers operate (Giles, 1990:64). It follows that the farmer as manager is a mixer or manipulator of factors of production such as land, labour, capital (largely technology), and information and advice as well as his own managerial skills (Jones, 1990:39) in order to increase the long term profit of the business (Leuning, 1989:12). Similarly Giles (1990) contends

that internal and external economic considerations of the farm play a major part in farm management (p. 65) as they have to make various choices between alternative uses of resources - in society at large as well as in individual businesses - in the attempt to satisfy the needs and objectives of all concerned (Giles, 1990:65).

In these settings the farmer as a manager - as with the case of any other small business operator (Gibb and Scott, 1985) - has the multiple tasks of making sensible decisions about the management of his internal environment whilst being attuned to (a)the wider "external environment"⁵ sufficiently (Bowman, 1990:73; Fuller, 1989:8; Gasson and Errington, 1993:28; Giles, 1990:65; Jones, 1990:41; Westgren *et al*, 1988:26; White, 1989:16) as well as (b)the consequences of his actions on the environment (Carter, 1990:55-62).

King and Sonka's (1985:2) definition of farm management seems to comply with these arguments. According to them farm management is a process in which decisions about allocating resources to meet desired ends are made, analysed and implemented. In performing these functions, they argue that the farm manager considers the resources available to the farm and the technical possibilities for combining them, the opportunities offered, and the constraints imposed by the environment. The allocation of resources and growth in its widest sense brings about the affinity between economics and farm management, which in turn is governed by the ultimate concern that the business should survive by gathering sufficient returns (Giles, 1990:66) and is shaped by the state of the farmers' values, attitudes, accumulated knowledge and/or experience (Olmstead, 1970:34). However it is not

the nature of these values, attitudes and accumulated knowledge we are interested in, but the resultant management actions/processes leading to economic success (see Appendix A1.1-A1.3 for a discussion of farmers attitudes, values and beliefs and their relevance to economic success).

3.1.5 Limited Resource Farmers, their production orientation and the limited market power

It was indicated in previous chapters that Sri Lankan rural farmers belong to the category of Limited Resource Farmers. This term warrants a general discussion on the basic characteristics of limited resources farmers (i.e. LRFs) and their managerial capabilities in adapting to the surrounding environment.

It has been noted by many authors that LRFs are usually “price-takers” (Blobaum, 1987:6; Meulenberg, 1986:308; Wossink, 1990:56; Giles, 1990:70; White, 1989:20, 21) in that they are incapable of exerting much, if any, influence on either the prices they receive for their produce (Cornelius, 1988:32; Giles, 1990:70) or the units of prices that are paid for their inputs (Giles, 1990:70). This tendency for “price-taking” by the LRF can be taken as a perspective reinforced by the fragmented nature of agricultural production, with many individuals producing similar produce (for a buyer’s market).

On the other hand, since the farmers produce a minute portion of the total industry output, their scale of production can never influence the price (Ferris, 1988:37). Giles (1990) in this context argues that the price-taking nature of the LRF strictly limits the

room for manoeuvre i.e. their selling into organised markets. This condition has further been aggravated as LRFs have limited capacities for managing the market mix because they have scarce contacts with the final consumer (Meulenberg, 1986:304).

According to Meulenberg (1986:307), the similarity of agricultural products supplied to the markets also makes it difficult for a farmer to develop niches in those markets⁶. Similarly, Carkner (1989:53) suggests that the individual producer is not capable of developing markets for his products, and that hence profits may only be improved through working within the framework of existing markets. Despite their need for adaptation, it has been observed that the majority of rural LRFs tend to follow well-established routine traditional decision paths (Bryant, 1989:337). These routines have been established mainly as a result of the increased openness of the agricultural production environment (Bryant, 1989-) and have been identified as being “production-orientated” (Brunaker, 1990:28; Dagher and Christy, 1991:1485; Ferris, 1988:37) in that they allocate more time, energy, and resources for production⁷ than to marketing (Dagher and Christy, 1991:1485). Given the previously discussed limitations of the LRFs, the eventual result of production-orientation is low-income leading to farm/economic failure.

3.1.6 Limited Resource Farmers need for market orientation and the marketing strategy

Consequently, Brunakar (1990:28) - by arguing that production-oriented perspective is an “internal focus” - stresses that a greater understanding is needed by LRFs to have an external focus i.e. to be market-oriented. He also points out that “market-

orientation” is a means of adapting to the changing conditions in the surrounding environment (p. 28). Cornelius (1988:32) and Lapping (1982:519) also recognise market orientation as the most important decision area for farmers to be focused on in the attempt to survive and prosper.

It has been argued by Meulenberg (1986:306) that market orientation (or, in a broader sense, environment-orientation) could be achieved by adopting marketing management⁸ practices. This can be done by developing marketing strategies⁹ in order to (a)exploit the full potential income that existing markets offer (Cornelius, 1988; Dagher and Christy, 1991:485, 86) and (b)to manage the risks the surrounding environment presents (Cornelius, 1988) (refer to Appendix A1.4 for a discussion of the various types of risks faced by farmers).

The preceding discussion in this chapter has highlighted the extremely dynamic and uncertain nature of the farm environment. Consequently it has been argued by several scholars that strategic management principles which have proven useful to non-agribusiness managers are also applicable to farmers (Cotterill, 1987; French *et al*, 1993; French and Westgren, 1986; French, 1989; Fuller, 1989; Harling and Funk, 1987; Harling and Quail, 1990; King and Sonka, 1985; King and Shuker, 1987; Litzenberg and Schneider; 1986; Marion, 1986; Martin *et al*, 199; Ohlmer *et al*, 1993; Schroder, 1989; Westgren and Cook, 1986; Westgren, 1987; Westgren *et al*, 1988; White 1989). However, there are hardly any empirical studies to investigate how applicable these principles are to LRFs.

Corneulius (1988:33) argues that the “strategy concept” is an approach to agricultural marketing that employs systematic co-ordinated decision-making. In this context, “marketing strategy” is defined as the means of arriving at marketing decisions alongside the logic for these judgements (Cornelius, 1988:33). Here the focus of the marketing strategy for an individual farm is a plan of action (p35) which is tailored to the particular environmental situation which precipitates it (p33).

The adoption of a marketing strategy by a farmer eventually leads to “strategic behaviour” which consists of the “actions taken by a farmer” to adapt to the market environment (Carlton and Perloff, 1990:400, 401), so as to increase the profits of the farm (Carlton and Perloff, 1990; Dagher and Christy, 1991:1485). These actions may be identified as choices made in terms of (a)the market level at which the farm decides to compete and (b)tactical dimensions such as product (what to supply at what quality - e.g. varieties of crops, breeds of animals etc. (Ferris, 1988:38), price (at what cost), distribution (where, when, what services), and promotion (what information) (Dagher and Christy, 1991). As a result, individual farmers are being forced to face the interdependence of production and marketing decisions such as what to produce, and at what quality, when to produce, at what times and in what markets the produce should be sold (Corneulius, 1988; Giles, 1990:70-71), which eventually leads to the need for farmers to adopt integrated production and marketing strategies which have to be implemented well before the commencement of production (Cornelius, 1988:36). The following table (3.1), based on the available literature (both empirical and normative), synthesises the various dimensions of potential marketing (and production) strategies which are/could be adopted by LRFs in order to adapt to the

(previously discussed) changing conditions in the enabling environment. However, the applicability of these to Sri Lankan Rural farming context is yet to be empirically validated.

Table 3.1: Strategies adopted by LRFs in order to adapt to the (market) environment

| Strategic action | Logic for the action | references |
|--|--|---|
| What to produce | <ul style="list-style-type: none"> (a)given the soil, climate and the presence of absence of a certain crop, selecting the best combination of products to gain advantage (b)focusing a specific niche market (or excluding other markets) to gain a higher margin/reduce risk through crop diversification (c)to differentiate the product from traditional ones on price/ introducing new crop or product to an area to gain advantage over others (d)gain a comparative /competitive advantage by selecting a particular commodity or combination of commodities to suit a farmer's resource status. (e)produce what can be sold rather than hope to sell what can't be produced (subject to internal and external environmental conditions) | <ul style="list-style-type: none"> (a) Carkner (1989:52-53) (b)White (1989:20,21) (c)Barkley and Wilson (1992:214/240,41) (d)Ikerd (1989:62) (e)Giles (1990:) |
| How should I best produce them? | <ul style="list-style-type: none"> (a)adapting a new technology (innovation) to gain cost advantage (b)become more efficient by decreasing the input use to increase profit and thus to gain competitive advantage over others. (c)relatively efficient use of resources in production to gain comparative advantage over others and become competitive by providing products to the market at a lower cost | <ul style="list-style-type: none"> (a)Barkley and Wilson, 1992:214) (b)White (1989:20,21) (c)Ikerd (1989:62,65) |
| How much to produce (it has been argued that increased capacity of earning and accumulation of capital are dependant on steady expansion of the size of farm operation (Heron <i>et al</i> 1994; 164) | <ul style="list-style-type: none"> (a)to reduce the cost of produce in order to gain a higher margin (this determine where to sell the products) (b)Farm more units or expand the enterprise to gain more and complete use of existing unused resources/ spread fixed cost over more units of output (economies of scale) | <ul style="list-style-type: none"> (a)Ferris (1988:37,38) (b)Jones (1991:1494) (c)White (1989:20,21) |
| When to produce | <ul style="list-style-type: none"> (a)take the advantage of market windows caused by seasonality in production due to variability in climatic conditions, physiology of crops and cultural practices. | <ul style="list-style-type: none"> (a)Colette and Wall (1978:192, 93) |
| Of what quality | <ul style="list-style-type: none"> (a) target niche markets to increase net margin (b) to differentiate the product to gain price advantage (c) to gain a price advantage (this determine where to sell too) (d)to gain competitive advantage by exploiting quality differences (i.e. to obtain price premium for quality) (e) to exploit the quality differences to gain a higher margin | <ul style="list-style-type: none"> (a)Dagher and Christy, (1991:1485) (b)Barkley and Wilson (1992:214) (c)Ferris (1988:38) (d)White (1989:20,21) (e)Giles (1990) |

| | | |
|----------------------|--|---|
| When to sell | <ul style="list-style-type: none"> (a) store and sell grains to reduce market risk (b) to take the advantage of variability in market prices caused by changing environmental factors (c) perishable nature of agricultural produce (d) to gain the price advantage by focusing specific market windows¹⁰ (e) to maximise the average returns by timing the sales (this is aimed at minimising the risk created due to the volatility of the market) (f) store and sell at a higher price to gain a higher profit (g) examine the price changes to determine when early marketing or delay is the more profitable alternative (h) to exploit price variations in order to get a higher price | <ul style="list-style-type: none"> (a)Nelson (1989:37) (b)Smidts (1990:1,3) (c)Dagher and Christy, 1991:1484 (d)Barkley and Wilson (1992:247) (e)Ferris (1988:41) (f)White (1989:20,21) (g)Gutierrez and Dalshted, 1989:72 (h) Giles (1990) |
| Who/where to sell | <ul style="list-style-type: none"> (a)focusing a specific niche market (or exclude other markets)or distribution channel to gain a higher margin/identify new markets/reduce market risk through hedging (b) Choice of a marketing channel by farmers in order take a higher price (geographical market windows) (c) to gain a price advantage by selling a product of different quality (d)to exploit the price differences in different marketing alternatives | <ul style="list-style-type: none"> (a)White (1989:20,21) (b) Smidts (1990:1,3) (c)Ferris (1988:38) (d)Giles (1990) |
| In what form to sell | <ul style="list-style-type: none"> (a)expansion of industrial uses of agricultural produce or value enhancement activities using agricultural products to gain a higher margin | <ul style="list-style-type: none"> (a)Barkley and Wilson (1992:240,41) |
| How to sell | <ul style="list-style-type: none"> (a)e.g. access the market quickly due to the perishable nature of agricultural produce (e.g.- pooling arrangements, contract production, co-operative marketing, direct selling to final consumer) (b)Focusing a specific niche market (or exclude other market) to gain a higher margin/ vertical integration-obtain more profits by moving higher or lower into the marketing and distribution channels (e.g. direct marketing¹¹). (c)focusing a unique niche market (by its location, income class, age, race or buying habits) to gain price advantage (d) cash sales, forward contracting to reduce risk (e)how much marketing functions should farmer perform in order to gain a higher price (f)how much to sell in each selling option | <ul style="list-style-type: none"> (a)Dagher and Christy (1991:1486) (b)White (1989:21) (c)Barkley and Wilson (1992:214) (d)Nelson (1989:39) (e)Ferris (1988:39) (f)Smidts (1990:3) |

3.1.7.1 Limited Resource Farmer and diversification

The above discussion dealt with the production and marketing manoeuvres that are adopted by LRFs in order to gain an advantage over the prevailing conditions in the environment. The other option available for price taking farmers for adapting to the environment is to diversify (though it creates risks due to new knowledge and skill requirements-Hill, 1990:65; Schwab *et al*, 1989:151) into new areas of businesses where they might also have more control over price (Henry, 1988; Jones, 1991:1495; White, 1989:21).

Diversification provides opportunities for farmers to move both (a)horizontally by expanding the enterprise (i.e. adding more farm units and enterprises to gain more complete use of existing resources or by acquiring additional resources) and (b)vertically to obtain more profits by moving higher or lower into the marketing and distribution channels (i.e. direct marketing etc.) (White, 1989:20-21). Dagher and Christy (1991:1485) point out that LRFs benefit from alternative enterprises¹² (horizontal integration) as they suffer adversely from price fluctuations and low net returns from the production of traditional crops¹³. In the case of vertical integration, according to Dagher and Christy (1991:1487), a farmer may combine activities that are on different levels. This enables him/her to improve profitability by pooling resources which also eventually leads to the enhancement of their bargaining position.

3.1.7.2 Diversification leading to pluriactivity

It may be argued that farmers' diversification attempts to embrace (Clout, 1993:62) and maximise opportunities (Fuller, 1990:367) eventually result in pluriactivity (see

table 3.2). De Vries points out that the pluriactivity can only be understood in its context (1993:192), and contends that it is the best concept for analysing the extent to which farming is combined with other income-raising activities (p197). Clout (1993) similarly argues that, if diversification is to provide a meaningful solution to declining farm incomes, it must be set in the broader context of pluriactivity.

Table 3.2: The term pluriactivity

| Reference | Definition |
|-------------------------------|---|
| Hetland (1986:385) | diversification activities carried out by one household on and off the farm |
| Fuller (1990) | farming in combination with other gainful activities |
| Herrmann and Uttitz (1990:63) | all activities (which are related directly or indirectly related to agriculture) of all individuals belonging to the agricultural household |
| Mackinnon et al (1991:59); | the phenomenon of farming in conjunction with another gainful activity, whether on or off-farm. |
| Evans and Ilbery (1993: 949) | the phenomenon of farming in conjunction with another gainful activity, whether on or off-farm. |
| De Vries (1993:191) | the phenomenon of farm households combining farming with other gainful activities |
| Bateman and Ray (1994). | the generation of income additional to that from primary agriculture |

Pluriactivity may be of various types, i.e. farm-based diversification from primary agriculture (Mackinnon *et al*, 1991:63) leading to combinations of income sources within and off the farm (Herrmann and Uttitz, 1990:65; De Vries, 1993:192). These activities therefore could be of an agricultural, agricultural related or non-agricultural nature (De Vries, 1993:192). They may be (a)income combinations within agriculture such as direct marketing of own produce (Herrmann and Uttitz, 1990: 65), producing and selling value-added products to niche markets (Wyson and Handwerker, 1989:206) and also (b)combinations of farming with secondary trades, such as cattle

dealer, shop keeper, contractor (De Vries, 1993:190,200) and/or providing service to agriculture (Herrmann and Uttitz, 1990: 65).

Hetland's (1986) findings reveal that two out of three farmers in Norway are pluriactive. Mackinnon *et al* (1991:63) discovered that off-farm income-generation is by far the most important form of involvement outside primary agriculture (by the Western European farmers) and that farm-based diversification from primary agriculture is not a significant event. De Vries (1993:190,200) has concluded that although the income from farming is indispensable, the non-farm activity usually provides the largest share of income. Herrmann and Uttitz, (1990:68) have found that farmers adopt non-agricultural income sources only when profit from the primary agriculture is insufficient. Similarly, Bateman and Ray (1994), by drawing from 427 interviews in Wales UK, have found that - whilst primary agriculture retained its position as the main income - only a minority of households do not have a supplementary income source off the farm.

3.1.7.2.1 Broader significance of pluriactivity

Rupena-Osolink, argues that pluriactivity provides an important source of national income, and hence its role is more important in rural development (1983:90). He further contends that the concept of pluriactivity provides a basis for evaluating the farm family as a unit of progressive improvement of the village and agricultural production, and hence a vital component of integrated rural development (Rupena-Osolink, 1983:91). Consequently, the existence of pluriactivity has raised questions about uneven development (Marsden, 1990:380). The study of pluriactivity - which

provides a point of entry into dynamics of agriculture at any point in time (Heron *et al*, 1994:156) - therefore may enlighten the understanding of the process of change in contemporary societies (Reis *et al*, 1990:395).

It may be argued within the above context, that the concept of pluriactivity helps (a)change the focus from “low farm income” to “low income of household” (Mackinnon *et al*, 1991:70) and (b)to achieve an understanding of how insufficient income generated from primary agriculture is supplemented by other income sources to achieve a continued net viability and reproduction of the businesses (Evans and Ilbery, 1993:966).

3.1.7.2.2 Pluriactivity and its relevance to economic success of farm families

Pluriactivity of a family may be influenced by economic factors (Herrmann and Uttitz, 1990: 64; De Vries, 1993: 199). However, the motives may be also socio-cultural (De Vries, 1993:200) and/or community driven (Fuller, 1990:367). This may not necessarily be remunerated with cash income; but payment may be in kind, mutual labour exchanges and/or other informal arrangements (Fuller, 1990:367).

Available literature confirms that pluriactivity may be adopted by farmers in order to adapt to market opportunities/conditions (Edmond *et al*, 1993:339; Schcksmith and Smith, 1991:342). This may therefore be included in measuring economic success (Herrmann and Uttitz, 1990:66) because it helps increases income (Evans and Ilbery, 1993:966; Heron *et al*, 1994:156-158; Mackinnon *et al*, 1991; Rupena-Osolink, 1983:89; De Vries, 1993:201) and hence secures the economy and welfare of the

family (Hetland, 1986:391; Herrmann and Uttitz, 1990: 64-65). Pluriactivity may represent either (a) a survival strategy (Blekesaune, 1989; Clout, 1993; Evans and Ilbery, 1993:966; Gasson, 1986; Heron *et al*, 1994:158; Herrmann and Uttitz, 1990: 64-65) or (b) a capital accumulation strategy (Evans and Ilbery, 1993:966; Heron *et al*, 1994:156; Marsden, 1990), and may facilitate further developments of the farm and/or family's socio-economic status (Herrmann and Uttitz, 1990:64-65). This may be through acquiring more land and more productive assets, leading to repositioning of the farm business and the family (Heron *et al*, 1994:158).

In the above context, pluriactivity has been identified as a strategy of diversifying the total income of the farm household both for consumptive and productive purposes (De Vries, 1993:191). Fuller (1990:367) argues that pluriactivity is a means of accommodating change or of adapting to agricultural realities or of minimising risk. This also reduces income vulnerability, (Mackinnon *et al*, 1991) by minimising the risk of specialisation (Hetland, 1986:391). The economic plight of pluriactive farmers is therefore less contingent on unfavourable development in the agricultural sector (Herrmann and Uttitz, 1990:71).

Pluriactivity has also been recognised as a process of mobilising human resources (Rupena-Osolink, 1983:90), facilitating more efficient use of family labour and the under-employed surplus labour (Krasovec, 1983:15). However, there are hardly any empirical studies to demonstrate how pluriactivity has been adopted as a survival and/or capital-accumulation strategy by individual farmers.

3.1.7.2.3 Sustainability of pluriactivity

It is clear from the discussion presented so far, that pluriactivity may play a major role in determining the economic success of farmers. It may be argued that pluriactivity means less leisure time and a higher work load (Herrmann and Uttitz, 1990:71) through higher management demands. Consequently Rupena-Osolink (1983:91) argues that the best possible result of pluriactivity could be achieved by rational use of personal resources. This underlines the need for choosing the right combination of off-farm and on-farm work (Krasovec, 1983), where the components are complementary to each other (Hetland, 1986:392).

This is congruent with the arguments presented by Wyson and Handwerker (1989:206) that it is important for LRFs to commit farm assets only to products or services that strengthen their existing activities. It may, therefore, be argued that diversification for LRFs works only with enterprises which do not have a high positive correlation and/or are competing for the same resources (Schwab *et al*, 1989:52). Consequently, Carkner (1989:53-55) categorises enterprises that may be adopted (in the event of diversification) by LRFs into two broad areas viz.: (a) “supplementary enterprises” and (b) “complementary enterprises”. Supplementary enterprises are defined as (p 55) enterprises that require the same resources but at different times of the year¹⁴, whereas complementary enterprises contribute directly to one another (Carkner, 1989; Hill, 1990:65). Carkner (1989:56) also argues that successful farmers develop a diversified mix of enterprises, adding enterprises until the potential for supplementary and complementary enterprises has been exhausted.

These concepts, however, still need to be empirically validated in the context of Sri Lankan rural farmers.

3.1.8 Summary and conclusions

It can be concluded from the discussion presented in this part that:

(a)The economic success of the farm business can best be studied by adopting the “farming system approach”, which provides a comprehensive and contextual view of farming by recognising (i)farming as an input-output system (ii)the interaction between farm/production unit and its surrounding hierarchy of environment is a dynamic relationship and thus (iii)there is a need for the farmer to adapt to the changing conditions in the environment.

(b)This need for adaptation necessitates farmers to adopt the dual task of making sensible decisions about the management of their internal environment while realising the wider external environment and the consequences of their actions on it.

(c)Management of the farm business represents a process by which decisions about allocating resources to meet desired ends are made, analysed and implemented. Therefore the farmer as a manager is a mixer or manipulator of factors of production, so as to generate sufficient returns to permit survival.

(d)Managerial adaptation (i.e. one that works primarily within the context of what he already has experience with) in this context is a process which consists of adjustments which are made in terms of combinations of factors of production - factors which

recognise the changes in relative input costs, or modification of the mix of products or services, that are already being offered.

(e)There is a limited manoeuvring capacity for LRF in adapting to the surrounding environment which calls for them to be market/environment-oriented (as opposed to production-orientation) and/or to diversify into complementary or supplementary enterprises leading to pluriactivity.

(f)Market orientation and diversification activities of the farmer are centred around farmers' "actions" (i.e. integrated \marketing and production strategies) which are shaped by their knowledge (experience) and awareness of the different aspects of the environment (both internal and external), goals (both family and business), values, attitudes and beliefs, and governed by his resource status.

(g)Continuous changes in the environment require the farmer/farm to continuously adapt to it (by being market-orientated and/or by diversifying into new areas), which eventually leads to changes in the social, economic and knowledge status of the farmers.

In the light of these conclusions, and also the conclusions presented in the previous chapter, the next part develops a set of researchable questions, objectives and a "conceptual framework of the economic success of farmers ", which will be used in investigating the broader research issue of this thesis.

3.2.1 Specific research questions and objectives

Given the insights gained from the literature review, the following specific research questions and objectives are formulated for further investigation (figure 3.2).

Figure 3.2 Specific research questions and objectives

| No | Research questions | Research objectives |
|----|---|---|
| 1 | What entrepreneurial activities/ processes could be observed in the study location and how do they contribute to the creation and accumulation of wealth (i.e. economic success)? | To study the entrepreneurial activities/ processes adopted by inhabitants in the location and their contributions to economic success. |
| 2 | What managerial activities/processes could be observed in the study location and how do they contribute to the economic success? | To study the managerial activities/ processes adopted by inhabitants in the location and their contributions to economic success. |
| 3 | Are the above two processes interdependent/complementary? Why? How? | To study the positions of entrepreneurial and managerial functions in the total business process and their relationships to each other towards determining the economic success of farmers. |

3.2.2 Conceptual framework: farmers' adaptation to the surrounding environment and economic success

It was argued in the section 1.2.4 that economic success is determined by the behaviour of the entrepreneur as it is expected that he behaves in a manner that is likely to increase his economic/business success. It follows that (see Lawrimore, 1988:75 for a similar argument):

(a)For each business/commercial activity¹⁵, the successful farmer holds theories concerning strategies required for success.

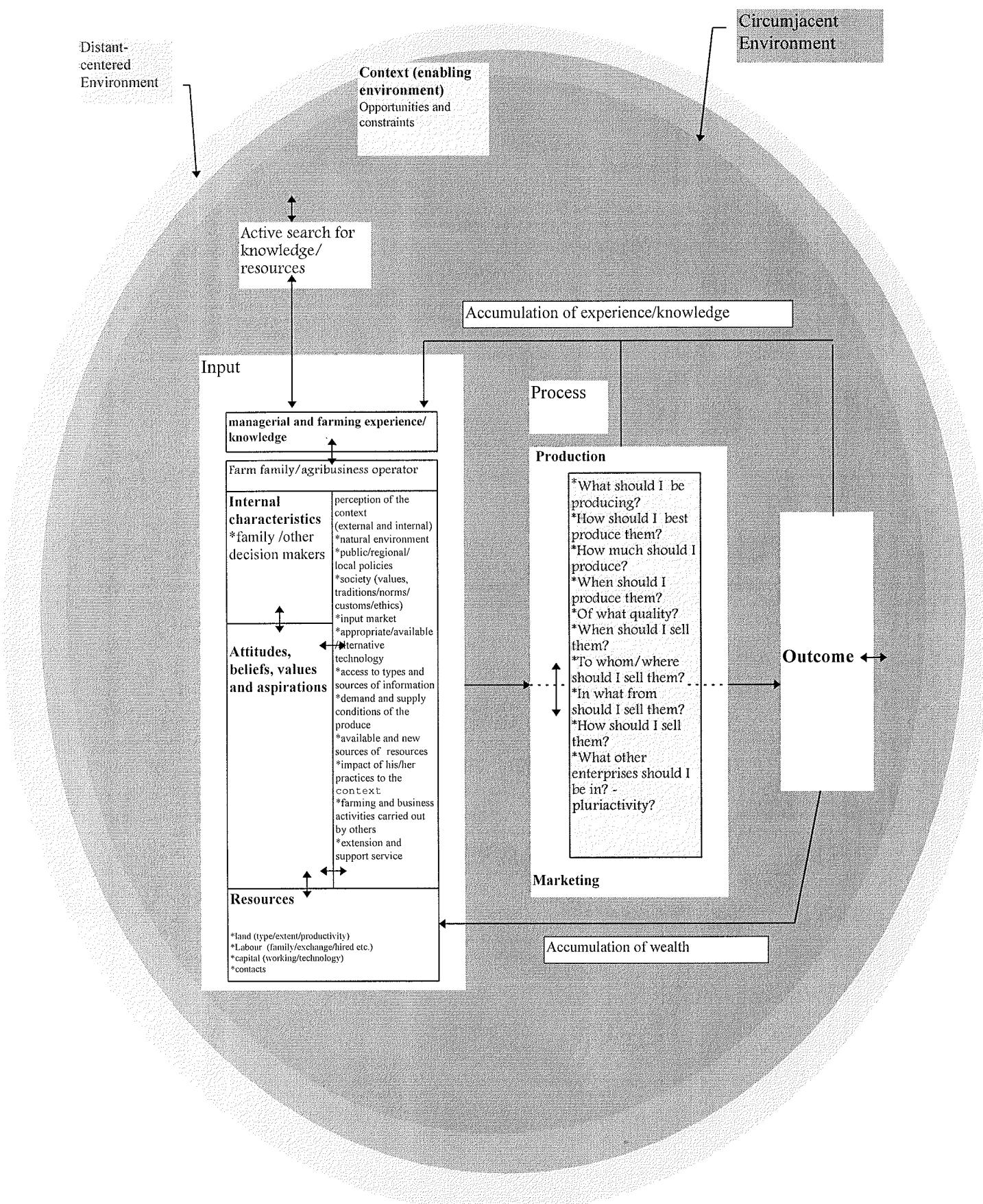
(b)The successful farmer's behaviour (i.e. which could be traced in terms of implemented strategies) is the manifestation of his theories and thus these

theories (along with the knowledge structure which led to these theories) could be unpacked by studying such strategies.

(c)The activity success theories and the strategies differ from that of unsuccessful farmers.

Consequently, a theoretical framework was required to guide the field work mainly as a conceptual starting point (see section 4.2.1 for justification of the need for a conceptual framework). The following conceptual framework was therefore developed based on the literature reviewed in part 3.1. This explicit use of agribusiness/farm management literature for formulating the framework was warranted by (a)the exploratory nature of the study and (b)the lack of prior knowledge about the entrepreneurial processes of farmers.

Figure 3.3 Initial conceptual framework-Farmers' adaptation to the surrounding environment and economic success



3.2.3 Summary

Chapter One justified the generic research issue of this thesis i.e. “the role of entrepreneurial process” in the economic success of rural farmers in Sri Lanka. This need was further justified on the grounds that there is little or no research carried out to date of similar nature. This was followed by a review of entrepreneurship literature. This review was focused on the contribution of entrepreneurial processes towards the accumulation of economic values (i.e. wealth) mainly under the constraint of limited resources. This eventually led to the argument that economic success in a limited resource context may be determined by both entrepreneurial and managerial functions. This justified the need for a review of literature on farm/agribusiness management and related subject areas (part 3.1). The main aim of this review was to delineate the explanations given on the economic success of small scale LRFs. Part 3.2 developed a set of specific research questions and objectives. This was followed by a development of a conceptual framework which could be utilised as a data/evidence-gathering tool. The next chapter (i.e. Part Two of the thesis) will present the research methodology adopted in this study.

¹According to Wossink, 1990:56, both economic and non economic goals.

²**Farm business and the family:**

“it is strange that the most important of the living things on the farm, the farmers and their families, the workers and their families, and the conditions of economic and human success for them have never been studied” (Ashby, 1925:16; Gasson and Errington, 1993:5. Similarly De Vries (1993:191) argues that family farming is the dominant form of agricultural production)

Gasson and Errington (1993:1) in the above context, point out that most farms in the world are operated as family businesses. They further imply that the farm family may be related to the farm

business and also actions in either sphere may also serve to assist or constrain achievements in the other which, they also note, have important implications for agricultural productivity and for human welfare (Gasson and Errington, 1993:2)

According to Redcliff and Whatmore (1990:189), it is only through understanding household structure and composition, their goals, relationships between earners and dependants (for example delegation of responsibility-Fuller, 1989:8; Errington, 1989:25), and the disparities between individual members (which emphasises the management of family conflicts (Robinson, 1989:28-34) that any sense can be made of the individual and collective activities in the processes of production and reproduction.

Cornaman et al (1982:222) on the other hand argues that failure to recognize variations in family aspirations and resources and other farm attributes has contributed to a single-dimension view of the small farm.

³They further categorise the "adjustments" found in positive adaptation into two types (Johnston and Bryant, 1987:17-18), viz. adjustments that are made:

- (a) to systems of production that result in greater output or lower cost of production.
- (b) to marketing systems, either in terms of types of products offered or the manner in which certain commodities are offered .

⁴Apart from the entrepreneurial process discussed in the section 2.2

⁵i.e. local, regional, national and international

⁶However, Wysong and Handwerker (1989) observe that there are some LRFs which have developed niche market strategies.

⁷i.e. technical and management aspects of good crop production

⁸This has been empirically illustrated elsewhere (see Kodithuwakku, 1996)

⁹This need is not warranted when the environment is static, as the marketing system is in equilibrium with its environment (Meulenberg, 1986:307)

¹⁰A particular period of time during which there exists a favourable probability that a commodity can be marketed at a profit. This period will exist when supply from traditional sources is relatively low or during periods of unusually high demand (Barkley and Wilson, 1992:247)

¹¹Selling to the final consumer

¹²For example high value export crops

¹³For example paddy in Sri Lanka

¹⁴As opposed to enterprises which compete with each other by requiring the same resources at the same time (Carkner, 1989:55)

¹⁵Gasson and Errington (1993:25) argue that farming cannot be considered as a business when it is purely involved in producing subsistence requirements. They point out that farming becomes a business when the outputs of the farming system are no longer used simply to "reproduce" the labour inputs, but enter the wider economy through monetary exchange, selling outputs, buying inputs thus drawing farming into a more open system. They further argue that when an individual farming system opens up in this way, it moves further along a continuum which stretches from a pure form of a subsistence production - where labour is the major input and all the outputs are either consumed by the labour involved in their production, given away as charity or seized by others through coercion - to a pure form of commercial production where all the inputs are purchased and outputs are sold. In accordance with this argument, this thesis assumes that a farm which is not engaged in any form of commercial exchange, does not constitute a farm business.

PART TWO

CHAPTER FOUR

Research Methodology

“Detailed studies of the farm households in defined localities shed light on the process of family farming ... The small sample size and qualitative methods used by anthropologists provide us with an understanding of farming in a way that large- scale survey research cannot” (Gasson and Errington, 1993:7).

4 Introduction

The main aim of this research is to investigate the role of the entrepreneurial process in the economic success of rural farmers of Sri Lanka. This is to be achieved through answering the specific research questions singled out in the section 3.2.1. Consequently, in the light of the arguments presented in the section 3.2.2, the following operational steps were decided as appropriate, viz.

- (a)select an appropriate research location(s) in the AMP.
- (b)describe and explore the processes of commercial activities carried out by both the economically successful and unsuccessful farmers so as to differentiate between the processes adopted by these two groups.
- (c)attempt to establish a relationship between economic success/failure and the economic (entrepreneurial and/or managerial) behaviour.

4.1 The Research Design

4.1.1 “Case study strategy” as the appropriate methodology

Methodological issues must always be answered within the context of a particular research setting. They are tools of inquiry and, thus, each inquiry requires a careful selection of the proper tools (Downey and Ireland, 1979:630).

The case study approach was selected as the appropriate methodology because of its ability for (a)description (Bonomo, 1985 :198:203; Hamel *et al*, 1993:39), (b)exploration of a given process(s) /event(s) (Mitchel, 1983:191-2 in Stoecker, 1991:97; Hartley, 1994:211, 13; Becker, 1966 in Stoecker, 1991:94; Gummesson, 1991:76; Kidder, 1982 in Eisenhardt, 1989:535) (c)differentiating general processes from exceptions (Stoecker, 1991:95) (that is its capability of highlighting a decision or a set of decisions - entrepreneurial decisions are distinguished from non entrepreneurial in this study) and (d)exploring why they were taken, how they were implemented and with what results (Schramon, 1971; Yin 1984:12).

4.1.2. Pilot study and its implications

Based on the conceptual framework outlined in the section 3.2.2, a semi-structured questionnaire was drafted to collect case study data. Initially, the questionnaire focused solely on farmers as individual cases¹ (i.e. the unit of analysis). System H of AMP² was chosen in the pilot area to test the data-gathering instrument. Table 4.1 depicts the insights gained from the pilot study and their implications for the adopted research methodology.

Table 4.1: Insights gained from the pilot study and their implications

| |
|--|
| 1. importance of the village social context |
| Insights gained from the pilot study further reinforced the conclusions drawn from the literature review that the entrepreneurial/managerial processes only have a meaning within a specific social and physical setting ³ (Bonomo, 1985:202; Chell, 1990; Miles and Huberman, 1994:27; Hartley, 1994:209; Rosa and Bowes, 1990). Clearly therefore there was a need for (a) a detailed investigation of the phenomena along with an analysis of the environmental context and the processes involved (Hartley, 1994:208-209; Hammersley, 1989:93; Rosa and Bowes, 1990) and/or (b) a holistic perspective ⁴ (Gummesson, 1992:17; Rosa and Bowes, 1990). It also became apparent that individuals (i.e. farmers) are inappropriate units of analysis (see McClintonck, 1985:206) and that the activities of individual farmers could not be studied devoid of their context (Miles and Huberman, 1994:27; Rosa and Bowes, 1990). |
| 2 importance of the longitudinal analysis |
| Furthermore, farming/business activities found in the location (and also in general) were season-specific and varied throughout the given cropping season. Therefore, in order to get a complete picture of the managerial and entrepreneurial activities of the farmers (in the context of production and marketing activities), a longitudinal analysis of such activities over a full cropping season was required (see Burgess, 1982:76 and Dibben, 1997 for similar argument in different context) Such an analysis provides an opportunity to show how cause and effect occur (Stoecker, 1991:104) over a chronological sequence of activities (Brunaker, 1993:43). |
| 3. importance of the historical aspects of the family/business |
| Moreover it was identified, during the pilot study, that an insight into a farmer's (or his family's) history (mainly after settling down in the village) is useful for understanding his (or family's) actual status. The importance of the historical context of the businesses processes that have led up to the family's economic status at the time of field study has also been highlighted by Kjellen and Soderman (1980:26-28) and Gummesson (1991:87). Brunaker (1990:29) has also noted the overall picture of a business's development will be clearer if the "critical events" of the family related to the business, their backgrounds and consequences are known (see Kjellen and Soderman, 1980; Gummesson, 1991:88). |
| 4. importance of the actors perspectives |
| The other important lesson learned from the pilot study was that the importance of taking into account the actor's perspective in understanding the rationale behind their entrepreneurial strategies (Rosa and Bowes, 1990). Similarly Becker (1970:64 in Hamel <i>et al.</i> , 1993:17) identified "the value of knowledge" about the actor's perspective of a particular situation (for example, about the obstacles they have to face, the alternatives they saw/see opening up to them and so on). Because, in the absence of this knowledge, it was not feasible to get a coherent understanding of the entrepreneurial behaviour of farmers. |
| 5. inappropriateness of the questionnaire |
| The pre-formulated, questionnaire (with pre-coded categories) was found to be capable of capturing most of the farming and business strategies adopted by farmers. However, it was not capable of examining diverse ways in which those strategies were implemented (for example, the involvement of the family and social networks in implementing such strategies) which greatly differed from one farmer/family to another. That is the questionnaire was not capable of capturing the contextual factors (see Miles and Huberman, 1994:35 for similar argument) crucially important in understanding the entrepreneurial component of the total business process (refer to figure 4.1). |
| It also became apparent that the questionnaire did not fulfill the requirement of the need for longitudinal analysis of the dynamic aspects of managerial/entrepreneurial activities of the farmer. This is to "go beyond the static snapshot of events and cut across the temporal and contextual gestalts of situations" (see Bonoma, 1985:204). |

Also highlighted in the section 4.1.2, the questionnaire was designed with the assumption that individual farmer as the unit of analysis. However the pilot study demonstrated that the interested phenomena could be understood only by taking into account the household and not the individual farmer (see Eboli abd Turri, 1981; Evans and Ilbery, 1993; Fuller, 1990:363; Herrmann and Uittitz, 1990:64; Redclift and Whatmore, 1990:189; De Vries, 1993). This was found useful in gaining insights as to household as the unit of (a)allocation of productive factors (Herrmann and Uittitz, 1990; Eboli and Turri, 1981) (b)income pooling (De Vries, 1993:191) and (c)use of income (Herrmann and Uittitz, 1990; Eboli and Turri, 1981; Herrmann and Uittitz, 1990; Redclift and Whatmore , 1990:189; De Vries, 1993).

The questionnaire therefore was modified into a topic guide-cum-analysis tool (i.e. loose template to assist in data gathering and analysis) which was utilized for continuous data gathering and analysis throughout the field work.

6. further justification of the case study approach as the appropriate methodology

The findings of the pilot study indicated the need for flexibility in the method of inquiry. It became apparent that a range of methods such as in-depth interviews, continuous direct and participant observations, taking of field notes, were necessary for a complete picture of the phenomenon under investigation. These insights further justified the appropriateness of the case study approach as it provides a flexible research strategy, capable of accommodating multiple research methods (Eisenhardt, 1989:535; Hamel, *et al*, 1993:-1; Hartley, 1994:209-210; Yin, 1994; Hammersley, 1989:93).

The case study approach is also an appropriate research strategy for taking into account the environmental context. It has been found to (a) be capable of piecing together the required contextual factors (Miles and Huberman, 1994:27; Geertz, 1973; Miles, 1979 in Bonoma, 1985:201; Hartley, 1994:208, 212; Yin, 1994:48; Zonabend, 1992:52 in Hamel *et al*, 1993:16, 33-, 53; Gummesson, 1992:17; Gummesson, 1991:76); (b)provide the tools to study the research issue (i.e. entrepreneurship) in a bounded context (i.e. in a rural village) (Miles and Huberman, 1994:25); (c)provide ways and means to understand the dynamics present within a single setting (Eisenhardt, 1989:534; Stoecker, 1991:97, 98) within certain historical period of a social unit (Stoecker, 1991:97-98) longitudinally (Hartley, 1994:212); (d)help understand those social processes in their organizational and environmental context (Hartley, 1994:212), within the meanings of the actors (Hamel *et al*, 1993:33; Hartley, 1994:212).

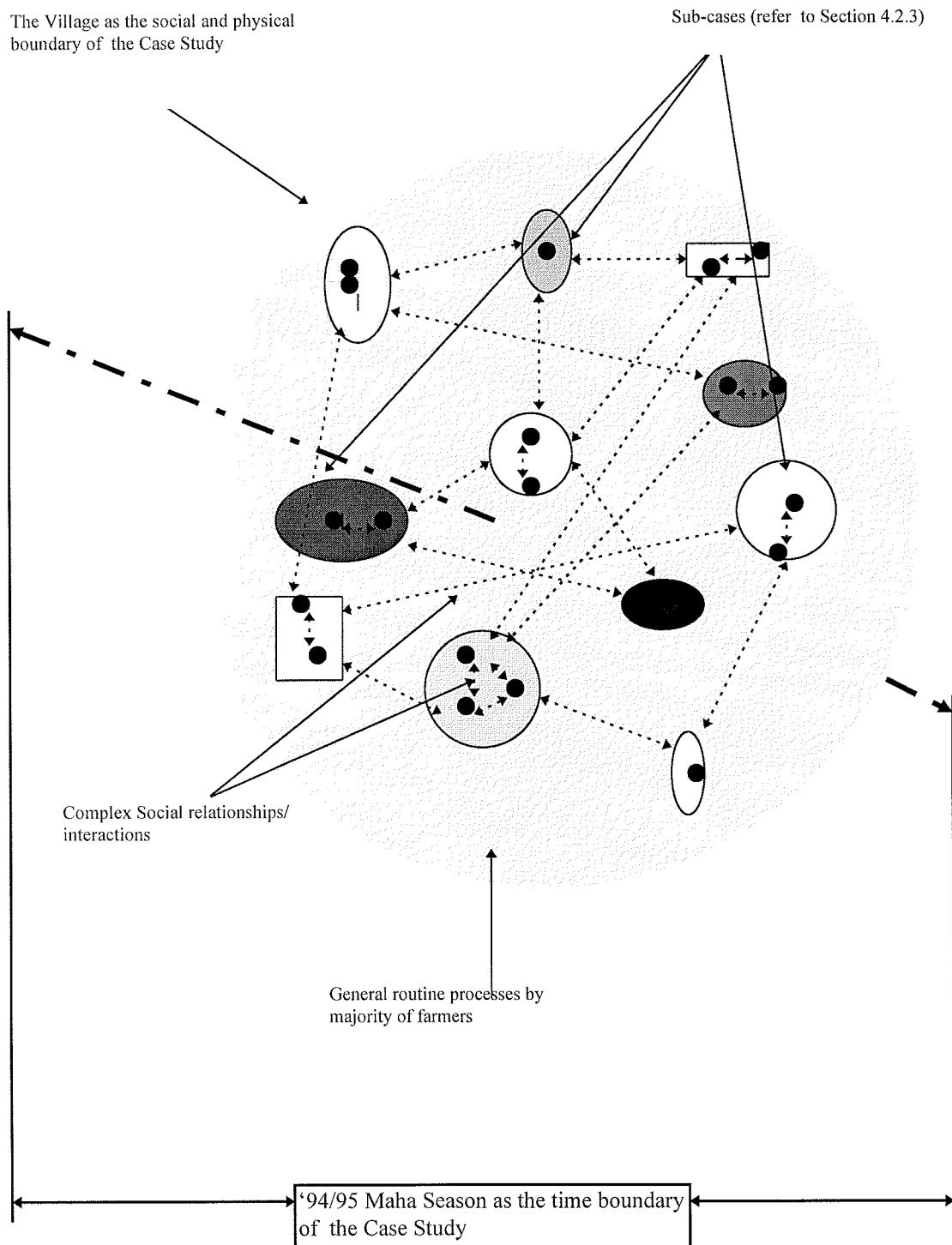
4.1.3 Re-focusing the case study approach: the multiple embedded case study

Thus the case study approach was therefore re-defined more broadly as a frame determining the boundaries of information-gathering (see to Stoecker, 1991:99 for a similar argument) rather than treating the farmer/family as the focal-point. The selected village (selection of a village as the case study site will be dealt in section 4.2.2.1) was therefore treated as the structural boundary i.e. according to the level and extent of the population (see Stoecker, 1991:109) and the "94/95 Maha season" provided the time boundary (see Yin, 1994:24 for a similar argument) of the case study (see Figure 4.1).

Finally, sampling decisions had to take (Burgess, 1982:77) account of the patterns of commercial activities carried out by economically successful farmers as well as unsuccessful farmers; identify exceptions or discrepant instances (i.e. entrepreneurial/managerial processes) where the general patterns (i.e. routines general processes) did not hold (see Miles and Huberman, 1994:29). Focusing on the commercial activity/processes was also a mandatory requirement for investigating the validity of the argument presented in the section-1.2.3, that every business operator may not be an entrepreneur.

This further (sampling) requirements seemed to be compatible with the selected major research approach i.e. the case study strategy, as the single case is capable of accommodating several sub-cases or sub-units of analysis (McClintock, 1985; Yin, 1994) which can also be selected through sampling techniques (see McClintock, 1985; Yin, 1994:41) resulting in a multiple embedded case-study design-figure 4.1 (Yin, 1994) (refer to section 4.3.2 for sampling techniques employed in this study).

Figure 4.1 Multiple Embedded Case Study Design



4.1.4 Qualitative methods (supplemented by quantitative evidence) within the case study strategy

A case-study approach is an umbrella research strategy in which several methods,(Hartely, 1994: 209) i.e.both qualitative and quantitative methods, may be employed (Stoecker, 1991:99; Yin, 1994). However, as was discussed in section 4.1.2, a pre-coded quantitative approach was not possible in this study. This was also due to the lack of prior knowledge of the farmers' entrepreneurial processes (see Dana, 1995 for similar application). Thus a strategy of "exploring and assessing" the processes by using qualitative methods (see Appendix A2.1) supplemented by quantifiable evidence was adopted (see Tremblay, 1982:98 for a similar technique). Data gathering methods used are discussed in the section 4.3.3.

4.1.5 Quality of the findings

The following table (table 4.2) depicts the four main tests commonly used to establish the quality of the findings of any empirical social research, together with their purposes (Yin, 1994:33) and limitations in respect of the adopted case study strategy in relation to each test. Furthermore, the table also illustrates the measures taken to counter each limitation.

Table 4.2 Quality of the findings

| Type of the test | Purpose of the test | Limitations of the adopted research strategy in relation to each test | Measures taken by the researcher to counteract each limitation |
|----------------------|---|---|---|
| 1.Construct validity | Establishing correct operational measures for the concepts being studied | (1) the case study investigators often fail to sufficiently develop a set of operational measures and “subjective” judgments are used to collect data (Yin, 1994:34) | (1) *use of conceptual framework (for data gathering and analysis) *use of multiple evidence (interviews, key informants, field notes and observation, within a natural ecologically valid setting (Bonomo, 1985:200-20; McClintock <i>et al</i> , 1979:616-127p; Yin, 1994:92) *verification of findings by the respondents. |
| 2.Internal validity | establishing causal relationships, whereby certain conditions are shown to lead to other conditions | (1) tendency of the investigator concluding incorrectly that there is a causal relationship (2) N=1 therefore generalization is impossible as a result of difficulties in meeting objectivity (Stoecker, 1991:90-91) | (1) *identification of most of the external factors (which affect the farming success) before hand, and selecting a unique case study site in order to control most of such factors. *pattern matching among sub cases in the multiple embedded case study design (Yin, 1994;Herriot and Firestone, 1983;McClintock <i>et al</i> , 1979:616) *use of qualitative data which is capable of explaining why or why not emergent relationships hold (Eisenhardt, 1989:542; Pope and Mays, 1995:43) *triangulation of different data sources (Bonomo, 1985:201-204; Pope and may, 1995:110; Bromley, 1986) *study of contrasting cases (see Hartley, 1994:226) by means of adopted theoretical sampling (Gummesson, 1992) to increase the confidence in findings. *linking the findings to existing literature (Eisenhardt, 1989:545) (2) *N=1 problem was overcome by adopting a well constructed (Bourdieu, 1992:57; Hamel <i>et al</i> , 1993:35) multiple embedded case study design. That is the selected “village” was treated as a cluster of units of analysis (McClintock <i>et al</i> , 1979; Stoecker, 1991:92; Herriott and Firestone, 1983; Yin, 1994:45; Eisenhardt, 1989:545) |
| 3.External validity | Establishing the domain which a study's findings can | Case study does not permit generalization of findings to other settings (Smith and Robbins, 1982; Berger, 1983; Yin, | *“data is contextual and can only be given meaning in the context in which it is generated and used. There they may be promoted to facts” (Gummesson, 1992:15; also see Hartley, 1994:225). In this context the study achieved a locally grounded |

| | | | |
|---------------|---|----------------------------|--|
| | be generalized | 1994:26; Hartley, 1994:208 | <p>causality by means of multiple case studies (see Miles and Huberman, 1994:26; Patton, 1980:279-283) or 'cross case generalization' (Bonomi, 1985)</p> <p>*findings were also generalized to theory (i.e. analytical generalization) as opposed to statistical generalization which generalizes findings to a larger population (Yin, 1994:36; Miles and Huberman, 1994:226).</p> <p>*use of multi-method triangulation (Campbell and Fiske, 1959; Hamel <i>et al</i>, 1993:8; Hartley, 1994:218; Jick, 1979:602-603; Webb <i>et al</i>, 1966;) - that is adoption of different methods or gathering of different kinds of data (Jick, 1979:602) in order to give the same explanation (Stoecker, 1991:106-120p)</p> <p>*generalization based on the identification of patterned behavior (Johnson, 1990:36).</p> <p>*due to the unique characteristics of the natural environmental factors (i.e. constraints and opportunities), most of the behavioral patterns of the farmers can also be generalized to a greater segment of the population as the study dealt with understanding how people enact their environment (see Argyris, 1979:673)</p> |
| 4.Reliability | Demonstrating that the operations of a study - such as data collection procedures - can be repeated with the same result | | <p>*potential problems of reliability were overcome by documenting operational steps so that another researcher in similar situation would produce more or less similar results.</p> |

4.2 Implementation of the case study strategy

4.2.1 Case study research: the need for a theoretical framework

"No matter how small our sample or what our interests, we have always tried to go into organizations with a well-defined focus to collect a specific kind of data systematically". (Mintzberg, 1979:585).

The need for a theoretical framework and its usefulness in case-study research have been argued and supported by many authors (see Appendix A2..2). Consequently Stoecker (1991:99) contends that "we are no more able to walk theory free into a social situation". Similarly Jick (1979:609) points out that, if a research is not focused theoretically or conceptually, all the methods in the world would not produce a satisfactory outcome. Consequently, sampling data/evidence gathering and analysis in this study were driven and aided by the conceptual framework developed in the context of farm/agribusiness management theories (see section 3.2.2).

4.2.2 Sampling decisions

"It is a common error to equate sampling with survey research and to assume that field research does not involve any form of sampling" (Burgess:1982: 75). Conventional field research is loosely structured and "loosely designed studies make good sense only when experienced researchers have plenty of time for exploring exotic cultures" (Miles and Huberman, 1994:17). Furthermore, "it is impossible to study every one every where and do everything" (Miles and Huberman, 1994:27). Consequently, the researcher using qualitative methodology is encouraged to utilize sampling techniques (Jick, 1979:604) as the carefully

and systematically done sampling helps in systematic data collection (Burgess, 1982:78; Jick, 1979:604) which in turn aids data analysis (Miles and Huberman, 1994:27).

4.2.2.1 Selection of the study site: choice of a specific village at System⁵ B in AMP

In field research, sampling commences with the selection of a specific research site (Burgess, 1982:77; Strauss *et al*, 1964) so that a researcher chooses to explore the life-ways of one social aggregate rather than another (Honigmann, 1982 in Burgess, 1982:79). The very selection of a research site is therefore a function of qualitative data (Jick, 1979:604) as this will influence the data that will be gathered (Burgess, 1982:76). It has been argued that, in this context, importance should be attached to the researcher's decision as to where to locate himself and his studies.

As indicated in the section 1.2.6, the AMP aimed to develop an egalitarian agrarian society. However, the original settlement criteria of the planners could not be applied to some of settlers - for example the evacuees from the upstream development areas who were paid adequate monetary compensation for their lost properties (MLIMD, 1989:63) and, similarly, some of the re-settlers⁶ who lost land which they had earlier owned in the settlement area had already been compensated in terms of cash and land.

As a means of encouraging some sort of social cohesion at the start (MILMD, 1989:64), the authorities made sure that all the settler families from the same geographical area (such as evacuees) were settled together in the same village, so that they could retain the traditional cultural patterns of their old villages (MILMD, 1989:4). Thereby, the heterogeneity that was

found in the traditional rural sector (as described in Chapter One) could also be expected to be found in some locations of AMP. This was more likely in both Systems H⁷ and C as the majority of settlers in these systems, according to Abeyasinghe (1991:13), are evacuees.

On the other hand, there are locations in the AMP with inadequate availability and uneven distribution of water⁸. This is predominant in System H (Scudder and Vimaladharma, 1989:14-15). Such conditions may be favourable to some yet elsewhere result in pockets of disadvantaged farmers with low income. These disparities may eventually cause landlessness and poverty problems (see Siriwardena, 1981; Thilakasiri, 1981 for examples). Disparities in soil types and quality may also exist. Therefore it is quite clear that all the locations in the AMP do not comply with the research criteria set out in sections 1.2.4 and 1.2.6 and, therefore, a specific study site within AMP must be carefully selected.

System B is the largest and the most recent settlement area under the Accelerated Mahaveli Development Project (see Appendix 3 for an introduction to System B). Farmers in system B (who are mainly married landless peasants (Perera, 1990) are provided with year-round irrigation water facilities (Abeygunawardana and Gunathilake, 1991; Gleason *et al*, 1993; Bandara, 1993; Perera, 1990; Wickramaratne and Bandara, 1991). Perera (1990) has estimated that crop failure due to scarcity of water would occur in System B only once in 40 years. Research carried out in relation to water distribution in the System B have indicated that there is no shortage of water for growing paddy at field channel levels (De Silva, 1990). This eliminates the water disparities between head-enders and tail-enders. This abundant irrigation water, and the existence of soil and climatic conditions suitable for a large variety

of crops including paddy (Abeygunawardana and Gunathilake, 1991; Gleason *et al*, 1993), tends to control the emergence of disadvantaged and low income groups - leaving the farmers to shape most of their own future. For this reason, system B was selected as the primary study site within the AMP⁹.

Nonetheless system B was not a homogeneous area as it comprised of different types of settlers, soils and relatively different degrees of water availability (though the variability is relatively lower in compared to other major systems). Therefore careful steps had to be taken to reduce these variables. A carefully selected “village” (i.e. the smallest socio-economic unit restricted to a geographical location) in system B seemed to be the ideal solution as the study site.

4.2.2.1.1 Criteria for selecting the specific village in System B

System B is further divided into eight administrative blocks (see to Appendix A3.1). Of these eight blocks, Ellewawa was chosen as the primary study site area. This block consisted of the most progressive farmers in the System B in terms of crop-diversification, farmer-organizations etc., something clearly documented by the MARD project (see Appendix A3.1.5.1 for the MARD project activities) and likewise concluded by the researcher after speaking to the relevant Mahveli officials. Therefore it was assumed that the selection of a village in Ellewawa block would provide the opportunity to study some of the most progressive (and possibly entrepreneurial) farmers in the System (see Appendix A3.1.7 for settler composition of the Ellewawa block). Inhabitants in the Ellewawa block have been settled in eight administrative units (i.e. hamlets/villages). There were two major types of

settlers in this block (i.e. evacuees and non-evacuees). For the purpose of the research (in order to control external variables), based on these two types of settlers, eight villages in the block were further divided into two major categories (i.e. Type I and Type II villages). Table 4.3 depicts the major differences characterizing the settlers in each of the two types of villages.

Table 4.3:Type I and Type II villages

| Type I Villages | Type II villages |
|---|---|
| (1)Consist of evacuees. | Non-evacuees selected based on the criteria discussed in the above section 4.1.1. |
| (2)Settlers in a given village have come from the same geographical location (i.e. village) prior to the settlement in System B. Previously established cultural and socio-economic relationships exist among settlers in a given village. As a result, the socio-economic conditions discussed in the Chapter One regarding the rural farming sector are relevant for this type of villages too. | Settlers in a given village have come from different geographical locations (i.e. socio-economic units) prior to the settlement. Therefore minimal existence of cultural and socio-economic relationships among settlers in a given village by the time of settlement. Therefore the socio-economic conditions discussed in the Chapter One are not relevant for this type of villages. |
| (3)Existence of heterogeneity in term of various resources (money, social network and contacts which can be utilized in both production, marketing and related activities) by the time of settlement. | Almost all the settlers have started from the same physical resource base (with minimal social networks and contacts among each other, leaving individual farmers/families to shape their own future). |
| (4)Names of respective villages: Ellewawa ¹⁰ , Ihala Ellewawa, Kalukele, Bandanagala | Pahala Ellewawa ¹¹ , Maguldamana, Mahadamana and Palatiyawa |

Of the four Type II villages, Pahala Ellewawa was selected as the study site. This selection of the "study village" was mainly based on the information provided by the officers at Mahaveli Agricultural and Rural Development (MARD) project, Mahaveli project office and the respective (i.e. Ellewawa) Block office.

4.2.2.1.2 More arguments to support a single village as the study site

The Sri Lankan “village” simulates a micro-export-import economy which produces agricultural goods mainly for, and imports a whole range of commodities from, outside markets (Hettige, 1984:207). Hettige (1984: 271-272) argues that the village is located within the wider national network of market-relations, and the functioning of the village economy is therefore largely governed by the forces emanating from this national network. Consequently, in the context of open economic policies (also after taking into account the insights gained from the pilot study-refer to table 4.1), the “village” may be considered as the smallest feasible geographical and social unit for the purposes of investigating the entrepreneurial activities of Sri Lankan rural farmers.

Strauss *et al* (1964), on the other hand, argue that selecting one location provides the researcher with a particular perspective of its institutions, gives a sense of its rhythms of life, helps piece together recurrent events, and builds up ideas about factors which relate to the phenomenon under research - effectively helping to gain insights into the holistic processes (see table 4.1).

The “village” is a concrete example of intersections of different levels of social organizations within a defined location (Geertz, 1959). Due to the fact that the “social system” of the village is uniform, it is possible to examine in detail what goes on in the locality (Leach, 1964:60). An explanation of the properties of social relationships¹² can be produced through the study of the village (Geertz, 1959). According to Hamel *et al* (1993:36), such a study aids in producing a macro rather than a micro sociological explanation. For example Leach

(1967), in a critique of an extensive survey of land ownership in Sri Lanka (Sarker and Tambiah, 1957) was able to draw conclusions on his field work in just one village to counter some interpretations from the statistics of 57 villages.

At the same time Maget (1953:57), argues that a village's capability of offering a homogenous social life combined with a low population density immediately provides many practical advantages for case studies. For example, due to its small size and homogeneity, the village provides an ideal observation site (Hamel *et al*, 1993:3) for observing common behavioural patterns, beliefs etc. (Maget, 1953).

Selecting a village as the study site (see section 4.2.4) has a major practical advantage: the effective utilization of triangulation (which was a major strategy adopted in order to maintain the validity of the findings-see section 4.2.6) within the imposed time and budget constraints (see Jick, 1979:610). Selecting one village as the study site also complies with Vyakarnam's (1990:ix) argument that "entrepreneurship in rural areas is community-based".

4.2.3 Further sampling decisions

As discussed in section 4.1.3, the primary emphasis for further sampling decisions of this study was focused on the 'processes' of commercial activities¹³ (see section 4.1.3), with the aim of differentiating the entrepreneurial activities/process from non-entrepreneurial activities/processes. Therefore the aims of the sampling were firstly to map those activities and subsequently to identify the decision-makers behind such activities for further

investigations. As a result, sub-cases in the multiple embedded case-study design were inevitably a combination of such 'processes' and the relevant 'decision-maker'(s).

In this context, individuals (both successful and unsuccessful farmers/families) represented different commercial processes (see McClintock *et al*, 1979:614)¹⁴. Therefore sub-cases in the current study were chosen for theoretical reasons (based on the discussion presented in Appendix A2.3) and not for statistical reasons¹⁵ (Eisenhardt, 1989:537). This sampling strategy complies with the arguments that qualitative sampling is "purposive" (Kuzel, 1992; Morse, 1989 in Miles and Huberman, 1994:27) and "theory-driven" (Miles and Huberman, 1994:27).

4.2.3.1 Key informants and mapping of commercial activities

It was necessary first to identify the population of inhabitants who represent commercial activities, then to differentiate the 'successful commercial families' from 'unsuccessful commercial families', and to finally study and compare the processes of income-generating activities. This was in order to investigate the influence of economic behaviour (managerial and/or entrepreneurial) on economic success/failure. In order to pursue this (within the given budget and time constraints) it was initially necessary to map the commercial activities in the location. This was accomplished mainly by employing ethnographic methods (i.e. key informants).

As far as mapping of the commercial activities, except for some activities such as keeping village boutiques and rice processing etc., most of the other business activities in the village

were not superficially apparent (as all the inhabitants in the village appeared to be performing uniform activities). Some of the business activities were frustratingly intermittent, as the types of business activities performed by farmers varied throughout the season¹⁶. There was no prior documentation of such activities by any other third party such as MDA (Mahaveli Development Authority) or MARD for the selected location. Therefore initially some inside information was required to start the mapping activity. This was done with the help of key informants. The use of key informants in this research has mainly been in the study of specific activities (i.e. commercial activities and related relationships) within a cultural setting, rather than the cultural whole usually detailed in ethnography (see Tremblay, 1982:99).

Initially two key informants were selected as entry points to the village. The selection was done based on information provided by the field-level extension officer (Field Assistant) at the Mahaveli unit office in the village, and field officers at MARD¹⁷ (see Johnson, 1982; Johnson, 1990:56 for a similar technique). The two key informants were the presidents of two main farmer organizations in the village. Furthermore, they had been elected for these position by the majority of the villagers for five consecutive years. In addition, after initial discussions, it became clear that they had a thorough knowledge of almost all the inhabitants in the village, their regular and usual patterns of behaviour, etc (see Freeman and Romney, 1987; Freeman *et al*, 1987 in Johnson, 1990:35). These demonstrated their effective leadership qualities and knowledge of the community¹⁸ (see Tremblay, 1982:100) which justified their position as key informants. Their suitability was further strengthened because they were amongst the most respected individuals in the village (see Johnson, 1990:73).

Indeed the two key informants also acted as gate keepers to the research site (Burgess, 1982:77). They facilitated the access for the researcher by providing introductions to the other informants/inhabitants. Furthermore these two key informants, along with others, became an important source of validation for a variety of economic (see Johnson, 1990:73), social and other important contextual data. As the initial step of the mapping activity, a list of settler households and a map of the village depicting the streets and the housing layouts was obtained from the respective Mahaveli Block office. As in Tremblay's (1982:103) study, these materials were used as visual aids which helped the key informants to think and recall the required information concerning their community. The final outcome of the initial stage of the mapping activity was a list of commercial activities and the household numbers of farmers/families who were responsible for such activities. The two key informants were able to provide a brief account of the background information (including the history) of the families and their commercial activities.

Those two key informants introduced the researcher to most of the other households who were on the list. During the initial phase of the interviews (which were conducted mainly as a part of the mapping activity), information on commercial activities and farmer/family background information was collected.

Moreover, this provided great opportunity to cross validate (triangulate) the information provided by key informants and by respondents. There was nearly a 100 percent match between information (i.e. about types of commercial activities, family involvement, historical aspects of business development etc.) between the two sources (except for one

farmer who did not disclose that he was involved in distilling and selling unrefined alcohol illegally). This further strengthened the position of the two informants as the major informants of the study. At the end of each interview, respondents of each sub-case were requested to provide information on other farmers/families whom they thought were in the same category (see Ostrander, 1980:75), and thus the researcher was introduced to new respondents¹⁹. This snowballing procedure helped the researcher in two ways: on one hand to cross-validate the information provided by the two key informants, and on the other hand to add few more new farmers/families to the initial list. The new households (and relevant information) were subjected to cross-validation by the key informants at a later date. As discussed by Werner (1989), the adopted snowball procedure provided the explicit means for moving through the village community in a methodologically and theoretically meaningful way, which led to the final outcome of mapping of commercial activities (along with a brief account of such activities) in the village which took in effect a census of the population of households who represented such activities together with background information on them (see table 4.4).

4.2.3.2 Differentiating successful commercial farmers/families from those of less/non successful farmers/families

The next step of the sampling strategy was to differentiate the successful commercial farmers/families from unsuccessful ones, so that a certain degree of causality could be established between the nature of activities/processes and the economic success/failure in the given context.

It was impossible for an outsider to superficially detect the relative differences between rich and poor families in the selected village (economically successful and unsuccessful). However, as Tremblay (1982²⁰ and 1957²¹) pointed out and implemented in his Stirling county study, key informants could help the researcher in differentiating the true boundaries of relative poverty or wealth of the above identified population. Hence it was decided to perform this task with the help of key informants. The two key informants suggested that this could be performed best with the help of their fellow office-bearers (of the farmer organizations). In addition, the validity of the results would also be increased by getting more key informants to participate in the aforementioned process.

The task was performed with the aid of two groups of key informants. These two groups consisted of the three principal office bearers of each of the two farmer organizations (i.e. the presidents, secretaries and the treasurers) in the village. The groups were asked to differentiate the population (of commercial farmers) into two categories viz.; relatively economically successful and unsuccessful groups. Since this was performed separately with the two sets of key informants, two sets of results were obtained. After comparing the two sets of results only two mismatches²² were found (i.e. cases 3 and 92). There was consensus among all the key informants that those households outside the identified population of commercial families were poorer (i.e. unsuccessful). As a result, the villagers were categorized into three major groups (see table 4.4) viz. :

(a)Economically successful commercial families (37 families)

(b)Economically unsuccessful commercial families (12)

(c)Economically unsuccessful non-commercial families (268 families)

These results were verified by the field-level extension officer who had lived in the village for about three years, who also identified all the economically successful farmers as the most progressive farmers in the villages. Furthermore, according to him, one of the above mismatches (i.e. case 92) was an economically successful family (although this family has experienced a partial commercial failure) and the other (i.e. case 3) was a failure (and this was confirmed later by the research findings).

It was also realized during the mapping process that there were also number of cases with contrasting backgrounds (viz. cases 33, 61, 92, 93, 119, 165, 253, 271, 275, 288 - see Table 4.4). This heterogeneity among sub-cases was treated as an opportunity to increase the confidence in findings (rather than treating them as constraints to the original research design).

For example, existence of economically successful “non-farming” families (e.g. cases 61, 119 and 288) provided a marvellous opportunity to study how certain inhabitants have been able to achieve economic success through overcoming one of the main resource constraints, i.e. land (as they were allocated only 0.5 acre of homestead allotments). Similarly cases 93, 165, 253 and 275 were useful in getting insights as to availability of resources is not a sufficient condition for achieving economic success. Cases 33, 92, 253 and 275 helped in increasing the confidence of certain findings i.e. some of the major causes of economic failures.

Miles and Huberman (1984 and 1994:28) as well as Eisenhardt (1989:539) argue that, taking into account contrasting cases, increases both the chances of gaining a broader perspective of the phenomenon under investigation and also confidence in final conclusions. On the bases that (a)the goal of theoretical sampling is to choose cases which are likely to replicate or extend the emergent theory (see Eisenhardt, 1989: 537) and (b)sampling in qualitative research is not wholly pre-specified and can evolve through field work (see Miles and Huberman, 1994:27), all the cases in the identified population (i.e. successful as well as unsuccessful commercial families) were studied in detail.

4.2.3.3 Issue of non-respondents

Johnson (1990:88) argues that, once representativeness is understood within a system of actors, the personal attributes of potential informants can play a role in their ultimate selection. This is because personalities of some individuals inhibit the forming of relationship between the field-worker and informants. During the field study, eight (of them five successful and three unsuccessful) framers were unwilling to participate. Furthermore one unsuccessful commercial farmer (i.e. case 3) did not meet a succession of repeatedly-made appointments. However, they were not excluded from the study since the key informants were capable of providing data on most of their general behavioural patterns related to the identified research problem area, data which contributed to the general understanding of contextual issues.

4.2.3.4 Second parallel sample

Following several repeated interviews²³ patterns began to emerge (see also Johnson, 1990:76) and there was little increased gain of knowledge or ideas on the focused research area (see Hartley, 1994-36; Yin, 1994; Glaser and Strauss, 1967). At this point a second parallel sample consisting of the households outside the above commercial population²⁴ was selected (see Johnson, 1990:76 for a similar technique). Selection of cases in the second sample were based on the representativeness of the routine behavioural patterns of the poorer and average group within the boundaries of the main case-study. Activities of the successful group could therefore be highlighted (or triangulated) in the context of routine activities in the location (which will be dealt with in Chapter Five). The selection was based on the information provided by the key informants and the respondents of the previous cases. Brief questions were used to probe households in the second sample (19 families in total) about theoretically-meaningful or strategically-important areas which had emerged from previously- studied sub-cases. Thus the information gained from the second parallel sample was helpful in increasing the confidence (by means of triangulation) in the findings of the case studies.

Table 4.4: Sampling information²⁵

| | Farming families (236 in total) and their major activities | Non-farming families (81 in total) and their activities | Total No. of interviews |
|---|--|---|---|
| | | | |
| Successful commercial Families | <p>Farming only</p> <p>26 Of these three cases (a) one family has brought a substantial amount of cash at the time of settlement (i.e. case 93)</p> <p>26²⁷ Of these 24 cases: (a) one has bought a substantial amount of cash at the time of settlement (i.e. case 165)</p> <p>(b) one case first became successful, then failed and finally become successful (i.e. case 271)</p> <p>(c) one case was a partnership between a farming and a non-farming family (i.e. case 60)</p> <p>(d) one case have first become successful and then partially failed (i.e. cases 92)</p> <p>(d) three were non-respondents (i.e. cases 317, 327 and 334)</p> | <p>Farming + other activities (pluriactive)</p> <p>2 (Cases 138, 24)</p> <p>1 This family is a non-respondent (Case 41)</p> <p>Farming only</p> <p>4 (Cases 61, 119, 288, 245)</p> <p>Farming + other activities (pluriactive)</p> <p>2 (cases 175 and 202)</p> <p>Other activities only</p> <p>2 Of these three cases: one is a non-respondent (i.e. case 202)</p> | <p>32</p> <p>37 (five were non-respondents)</p> <p>08</p> <p>12 (three were non-respondents)</p> <p>03</p> |
| Unsuccessful commercial Families | <p>Farming only</p> <p>4 (Cases 3, 267, 6, 53) Of these one family was a non-respondent (i.e. case 3 researcher was not able to contact this farmer as he was busy throughout the season)</p> | <p>Farming + other activities (pluriactive)</p> <p>5 (cases, 2, 10, 79, 83, 155)</p> <p>1 This family is a non respondent (Case 4)</p> | <p>NIL</p> <p>NIL</p> <p>NIL</p> |
| Non-commercial previously successful families | <p>Farming only</p> <p>3 Of these three cases: (a) two families have brought substantial amounts of cash at the time of settlement (i.e. cases 253 and 271)</p> <p>(b) one family has become successful and then failed (i.e. case 33)</p> | <p>Farming + other activities (pluriactive)</p> <p>3 Of these three cases: (a) two families have brought substantial amounts of cash at the time of settlement (i.e. cases 253 and 271)</p> <p>(b) one family has become successful and then failed (i.e. case 33)</p> | |
| Other non-commercial families parallel (second sample) | <p>13 of theses families were interviewed in the second parallel sample</p> | <p>6 of them were briefly interviewed in the seconds parallel sample.</p> | <p>19 (brief interviews)</p> |

4.3 Methods of data collection

As is the usual case with a case-study approach (Bonomo, 1985:203; Eisenhardt, 1989:534; Gummesson, 1991:108; Hamel *et al*, 1993:1; Hartley, 1994:215; Yin, 1994), and because it was necessitated by the insights gained from the pilot study, this investigation utilized multiple data sources viz.; primary data sources such as repeated in-depth interviews, brief informal interviews, direct/participant observation and filed notes besides numerous secondary data to establish the context. These multiple data sources were used as a means of “triangulation”²⁸ as well as to get a fuller picture of the business units under study (see Bonoma, 1985:203 for a similar argument).

4.3.1 Repeated in-depth interviews

In-depth interviewing is fundamental to all qualitative methods (Smith *et al*, 1992:71). In case studies, interviews are used more to explore and probe the particular circumstance of the organizational behavior and its specific context (Hartley, 1994:210). Consequently, the primary purpose of interviewing in this study was to understand the meanings interviewees attach to issues and situations in contexts (i.e. actors’ perspectives) that were not structured in advance (see Smith *et al*, 1992:73). This helped to adopt a more interactive procedure, which in turn facilitated tracing how different issues and situations held different significance for different cases (see Stoecker, 1991:95).

Interviews were aided by a topic guide (see Appendix 6) which was based on the conceptual framework which indicated the main areas to be explored (see Smith *et al*, 1992:75) in a certain direction (see Jones, 1985 in Smith *et al*, 1992:74; Yin, 1994:69). During the

interviews, the informants were given latitude to choose their own order and manner of presentation, although a systematic attempt was made by the researcher to fully cover the areas of investigation (see Tremblay, 1992:98 in Burgess, 1982:98). This was possible because repeated contacts were made with interviewees. At the same time, adjustments, such as the addition of topics, were made to the topic guide during the progress of the study (see Harris and Sutton, 1986 in Eisenhardt, 1989:539), allowing new areas to emerge (see Smith *et al*, 1992:94) and to be investigated.

As in Smith *et al*'s (1992:79) researching of small business owners, interviews in this study started with a general discussion about their farming and those other business activities that they knew and understood best. This helped the researcher (a)to establish a general background of the family and their activities based from which, further investigation could be carried out and (b)to develop a relationship with interviewees (i.e. to establish rapport). Furthermore, subsequent questions were probed on their business activities. The answers, incorporating contextual information about their decision-setting, was also extracted during the process of analysis (see Argyris, 1979:672). Since the investigation was aimed at understanding actors' own perspectives of situations, it was found that interviewees were intrinsically interested in participating in the interview process as it was a relatively new experience to them (these farmers are already being subjected to numerous field-surveys, based on pre-formulated questionnaires, on various socio-economic and technical aspects of crop production, by different institutions of the country).

Each interview started with the main respondent (based on the information provided by key informants). Later family members were also allowed to participate if they were willing to do so. The willingness of other family members to participate in the interview process indirectly added to the general understanding of the investigated subject area, such as family involvement in farming/business activities. All the interviews were tape-recorded (with the permission of the interviewees) and later analyzed in order to identify further areas for exploration during later contacts. Audio-taping of interviews helped the researcher to conduct the interviews with minimal interruption. This ensured efficient utilization of farmers' free time, an important consideration given that they were involved in seasonal activities and therefore under time-pressure. At the beginning of each contact interpretations of what was said in the previous interviews were summarized to interviewees, and corrections were made when relevant. Repeated contacts also provided the researcher with the opportunity to cross-check both qualitative (i.e. words representing themes and patterns) and quantifiable information such as price, cost of production data (see Eisenhardt, 1989:534-92p; Tremblay, 1982 for similar techniques) given in previous interviews.

4.3.2 Brief interviews with the second parallel sample

The main aim of the second sample was to supplement (a)the contextual information obtained from the key informants and participant/direct observation and (b)the inferences extracted from the interview findings, on the general (i.e. routines) and exceptional (i.e. entrepreneurial/managerial) behavioural patterns in relation to the farming/business activities in the location. The results of these brief interviews with the poorer groups were helpful in further confirming that the socio-economic behaviour of the successful farmers was different

from that of unsuccessful farmers (i.e. to increase the confidence in findings of the previously-studied sub-cases).

4.3.3 Direct/participant observations and taking of field notes

The unique feature of agricultural production and marketing activities is that most of these activities are carried out in an open environment which is observable by another party. As a result, relevant behaviour and environmental conditions are available for observation. Such observation, according to Yin (1994:86), serves as yet more useful evidence in a case-study. Furthermore, direct/participant observations on a wide enough range of activities (see Pope and Mays, 1995:111) provided an opportunity to triangulate between (see Yin, 1994:92) what is said (by the respondents during the interviews) and what is actually done. At the same time, inferences gained from observations provided an opportunity to triangulate the findings of other data-sources (i.e. interviews, key informants) on contextual factors (see Jick, 1979:603 for triangulation as a means of capturing the context)²⁹. Moreover, as has been argued by Rosa and Bowes (1990:8), participant observation carried out over the entire cropping season, helped to gain an understanding of complex social interactions (refer to figure 4.1) whose existence could not have been envisaged before the study began. During direct observation, field notes and sometimes photographs were taken.

4.3.4 Secondary data

Data on national and regional policy issues, irrigation/rainfall water availability, land allocation and hidden tenancies, cost of production of various crops and market conditions (i.e. price details etc.) was extracted from various documents held mainly at the MARD

project office and Mahaveli Block office. The obtained data was used in supplementing the establishment of case study context (i.e. Chapter Five). Furthermore, some of the secondary data (such as price fluctuations, cost of production) was helpful in triangulating the case-study findings - which increased confidence in some conclusions. Data sources and their contribution to the research understanding are depicted in the table 4.5.

Table 4.5: Different data sources and their contribution to the understanding of the phenomena

| The sources and methods of data collection within the case study strategy | Main contribution of each source to the final understanding | Other contributions of each data source to the final understanding |
|---|---|--|
| Key informants | Contextual | Theoretical |
| In-depth interviews (sub-cases) | Theoretical | Contextual |
| Direct/participant observation | Contextual | Theoretical |
| Field notes | Contextual | Theoretical |
| Brief interviews (with the second parallel sample) | Confirmation of specific contextual factors and theoretically meaningful areas established from the above sources | Theoretical |
| Secondary data | Contextual | Theoretical |



4.4 Data analysis

The ultimate objective of analysis is to treat the evidence fairl, to produce compelling analytic conclusions, and to rule out alternative interpretations” (Yin, 1994:103).

As described in Appendix A2.3, data/evidence gathering and the analysis was carried out simultaneously (see Bogdan and Biklen, 1982; Eisenhardt, 1989). The process of analysis consisted of three simultaneous stages viz.: within (sub) case analysis, cross-case analysis and comparison of findings with existing theory. The nature of data analysis adopted in this study was also closely related with the “pattern model” identified by William (1976) and

Hammersley (1989), in which explanation is not separated from description. In other words, this study adopted a method which describes the relationship between one action and others in context, interpreting or explaining the meaning of such actions whilst describing their places and their relationships to other parts (Bryman and Burgess, 1994:6) in the given context.

4.4.1 Within case analysis

The case analysis was executed in keeping with the conceptual framework and the topic guide. Because the analysis was carried out simultaneously with data gathering, it was also feasible to try out new ideas as and when they emerged (Bogdan and Biklen, 1982). This method eventually led to the identification of key processes (Miles and Huberman, 1994:33) within each case. The identification of key processes was achieved through pattern recognition of how certain groups of farmers prosper in the selected location.

4.4.2 Cross case analysis

Cross-case analysis was used to identify patterns of similarity and differences (see Eisenhardt, 1989:540; Gummesson, 1991:84; Yin, 1981:63; Miles and Huberman, 1994) in the case processes. This was carried out in a manner which is similar to the “case survey method” that incorporated scientific rigor to the study (see Yin, 1979:371, 372). The cross- case analysis method adapted from the “case survey method” utilized the conceptual framework and the topic guide rather than using a close-ended questionnaire.

4.4.3 Comparison of the findings with theory

Eisenhardt (1989:544), Hartley (1994:220) and Yin (1994:103) have outlined the importance of comparing data to existing theory during the process of data analysis. Yin (1994:103) suggests the preferred strategy is to compare data with the related theoretical propositions that led to the case study investigation. Consequently, the conceptual framework, topic guide and reviewed literature on entrepreneurship and agribusiness/ farm management were used to analyse the data.

4.5 A concluding note

The discussions (along with a variety of arguments) presented in the chapter comply with the following arguments made by Herron *et al* (1992) regarding research on the entrepreneurship processes viz.:

*multi-stage designs are needed to capture the holistic nature of the process.

*in-depth data gathering will be needed to capture the richness of key variables.

*studies will generally have to be longitudinal to capture the dynamics, discontinuities and changes inherent in the process.

*the breadth of the study has to be sacrificed in favour of the richness and depth.

*purposive rather than random sampling of data sites is preferred.

*rich qualitative and quantitative data should be gathered.

*there is a greater need for direct observation, interviews, verbal protocol, and the other methods to get at the “richness” issue implicit in most of the prior arguments.

¹The ultimate responsibility of running a farm will usually rest with one person, 'the farmer' (Gasson and Errington, 1993).

²Before the pilot study commenced, the decision had been taken to conduct the field study in System B and therefore a separate site was selected for the pilot study in System H. This was to avoid any spoilage of the final field work (note: a choice had not been made at this time as to which particular location(s) of system B should be selected as the study site(s). However, after making final decision for the study site, the later stage of the pilot study was extended to system B. This was carried out outside the selected study village.

³Contextual nature of the farming/business activities was inferred during the literature survey. However, it was the pilot study which helped revealing the wider relevance of village context.

⁴This means that the researcher pays attention to both the parts and the whole. The holistic view maintains that the details can only be understood as parts of the whole (Gummesson, 1992:17).

⁵Water released from major reservoirs under the Accelerated Mahaveli Development Programme, after power generation, is available for irrigated agriculture and the consequent creation of new down stream settlements are referred to as 'systems'. The major downstream development settlement systems under AMP are systems B, C and H.

⁶Another settler type who have been re-settled from within the area under the new scheme.

⁷The majority of system H settlers come from within the same geographical area (MPCMAS, 1980:13).

⁸With regard to output and productivity are concerned, farmers located at the tail end of the irrigation system are mostly at a disadvantage as the system is based on the gravity flow and a network of channels carrying water to the fields.

⁹The other major advantage of selecting system B as the primary study site is the availability of a large body of knowledge about the system B farmers and their on-going farming activities etc. compiled by the Mahaveli Agricultural and Rural Development (MARD) project sponsored by USAID.

¹⁰This village has been awarded the "best village in the block" in "Mahaveli Week" 1994 competition.

¹¹This village has been awarded the "second best village in the block" in "Mahaveli Week" 1994 competition.

¹²The focus of the study is not the connection between people, but the context within which these connections take place in relation to a given process (see Hornby and symon, 1994:171).

¹³Farmers were considered as commercial families if (a) they cultivate more than one hectare of land and/or (b) diversified in to other income-generating areas, whereas non-farmers were considered as commercial if they have diversified into any other income-generating activity other than selling their labour (refer to table 5.4).

¹⁴i.e. the activities of current theoretical interests (see McClintock et al, 1979).

¹⁵Statistical representativeness was not a requirement for sampling of this study as the major objective was to understand the "process" (Pope and Mays, 1995:110). Each (sub) case in the study was selected so that it would either (a) predict similar results (a literal replication) or (b) produces different results but for predictable reasons (a theoretical replication) (Yin, 1994:46).

¹⁶That is: all the activities in the location are not carried out at one point in time as they vary throughout the season.

¹⁷Apart from the field level officers at MARD project, there was a research assistant in the MARD project who was a son of a settler. He became another independent and informal key source of information.

¹⁸Knowledge of the social structure is an important basis for informant selection (Johnson, 1990:84).

¹⁹Some other informants were added at the suggestion of previous informants.

²⁰The anthropologically-selected key informants (as opposed to randomly-selected respondents) were able to differentiate to poorest from the richest (Tremblay, 1982:98, 99).

²¹Key informants could provide folk definitions of poverty and wealth and help in determining the relative poverty of communities and their true boundaries (Tremblay, 1957 in Johnson, 1990:46).

²²i.e. two families which are, according to one group of key informants, successful - and yet unsuccessful according to the other group.

²³Repeated interviews of the identified population.

²⁴From the poorer group of farmers.

²⁵There were 49 commercial families (40 farming and 9 non-farming families out of 236 farming and 81 non-farming families respectively) in the village. Of the commercial families, only 37 cases (30 farming and 7 non-farming families) were identified as economically-successful families). This is about 12 percent of the total population and about 76 percent of the population of commercial families. As far as the two main categories of inhabitants (refer to table 4.4) are concerned, about 13 percent of farming families (30 out of 236 families) and 8.6 percent of non-farming families (i.e. 7 out of 81 families) had achieved a relative economic success over others.

²⁶Cases 68, 93

²⁷Cases 2, 9, , 12, 17, 27, 56, 77, 82, 60, 91, 92, 95, 96, 112, 122, 140, 165, 172, 250, 254, 263, 292, 271, 317, 327, 334.

²⁸Collecting information through multiple sources aimed at corroborating the fact or phenomenon (Yin, 1994:92; Eisenhardt, 1989:538)

²⁹i.e. contextual information based on the decision-makers' perception of their decision-setting (see Downey and Ireland, 1979:634).

PART THREE

CHAPTER FIVE

Analysis Of The Environmental Context

5 Introduction

Chapter Two argued that the entrepreneurial process may best be understood within its environmental context. Chapter Three (section 3.1.1) similarly contended that economic success of the farm business can best be studied by taking into account the interrelationships between the rural household (i.e. the production and consumption unit) and its surrounding environment in a holistic manner. The relevance of these arguments to the Sri Lankan rural context was clearly demonstrated at the pilot study stage (i.e. need for studying the action in its environmental context) and justified the adopted case-study research strategy.

The main aim of this chapter is to describe and analyse the environmental context so that the stated research questions may be answered in great depth. This chapter will be divided into four parts. Part one briefly introduces the main income-generating activities in the village and their relationships to economically successful and unsuccessful farmers. This is followed by analyses of the environmental constraints for (a)paddy cultivation (Part 5.2) and (b)other income-generating activities (Part 5.3). These analyses will demonstrate how the environmental constraints have influenced/pressurized the economically-unsuccessful farmers to form a routine cycle of socio-economic activities leading to an apparently uniform context, which will in turn provide the basis for highlighting the diverse entrepreneurial and managerial processes of the economically successful farmers. Part 5.4 presents the summary and a conclusion in terms of the theoretical implications.

5.1.1 Paddy based economic system

Paddy cultivation was found to be the main income-generating activity adopted by the inhabitants. The other main commercially-oriented income-generating activities were also limited in variety. Of them, keeping village boutiques (the term “*boutique*” in the Sri Lankan context is analogous to corner-shops in the UK - see Appendix A4.1 for the basic characteristics of boutiques), buying and selling paddy, rice-processing, rice-milling, hiring out farm power (tractors and draught animals) and money-lending (at interest rates of 15 to 20% per month) were found to be the most predominant activities (see table 5.1).

Table 5.1: Other main income-generating activities in the village

| Type of Activity | Number of Families* | Paddy dependent | Village dependent | Demonstration cases |
|---|---------------------|------------------|-------------------|-------------------------|
| Keeping village boutiques | 16 | indirectly | yes | 56, 92, 138, 271 |
| Bakery | 02 | indirectly | yes | |
| Rice processing | 11 | yes | yes | 9, 77, 82, 95, 165, 250 |
| Buying and re-selling paddy | 06 | yes | yes | 9, 60, 82, 92 |
| Paddy brokers | 02 | yes | yes | 9 |
| Rice-milling | 05 | yes | yes | 9, 56, 92, |
| Hiring out bullock carts | 02 | partly | yes | 60, 119 |
| Hiring out tractors | 17 | yes | yes | 60, 92, 95, 96 |
| Hiring out draught animals | 10 | yes | yes | 93, 96, 119 |
| Selling agrochemical | 02 | yes | yes | 82 |
| Contracting paddy harvesting | 03 | yes | yes | 60 |
| Money lending | 06 | yes | yes | 60, 82, 96 |
| Fishing | 02 | no | no | 254 |
| Animal husbandry (a) keeping dairy cattle (b) goat keeping | 07 02 | indirectly no | no no | 95, 119, 119, 275 |
| Carpentry | 01 | indirectly | yes | |
| Ready-made garments/tailoring | 03 | indirectly | yes | 82, 288 |
| Short-eats and confectionery | 03 | no | no | 56, 288 |
| Making and selling spice-packets | 01 | no | partly | 288 |
| Contracting irrigation channel maintenance | 04 | yes | partly | 77, 165, 250 |
| Bicycle repair shops | 01 | no | yes | 92 |
| Makeshift tea-rooms | 02 | no | partly | 56 |

*Please note that one family may carry out more than one activity

 These aspects will be dealt in section 5.3.1

5.1.2 Economic success and pluriactivity centered around farming

Of the 37 economically-successful families (see Table 4.4), 30 families (81 per cent of successful families) had diversified into other business areas i.e. they were pluriactive



Village boutique (Case 56)



Village boutique -Case 271

(see figure 5.1). In contrast only 5 out of 12 (42 percent) of unsuccessful commercial families were pluriactive.

**Figure 5.1 Economically sucessful farmers
(monoactive vs pluriactive)**



With regard to successful “farming families”, 87 percent of them were pluriactive (i.e. 26 out of 30 families). This figure for successful “non-farming” families was 57 percent (i.e. 4 out of 7 families). Furthermore, all the successful pluriactive families (i.e. 30 in total) carried out “farming” as their major income-generating activity.

In fact, about 89 percent of the successful families (i.e. both pluriactive and monoactive) carried out “farming” as their main-core income generating activity (33 out of 37 families). Only two (6.6 percent) of the successful farming families (i.e. cases 24 and 138) had completely given up “farming” (i.e. negative adaptation - see section 3.1.4). This confirmed that (a)the significant share of the successful families were pluriactive and that (b)their pluriactivity was centered around the main-core income-generating activity of “paddy cultivation” (i.e. farm based diversification-see section 3.1.7.2). The only successful pluriactive family which was not engaged in paddy farming was a non-farming family (case 61). A description of the other farming activities (i.e. OFC cultivation and animal farming) carried out at the location, and their relationships to successful and unsuccessful farmers, is presented in Appendix A4.2.

5.1.3 Unsuccessful farmers and their dependency on paddy farming

Of the unsuccessful farming families, about 97 percent (i.e. 200 out of 206 families) were entirely dependent on paddy farming and/or selling physical labour. Only about 4.5 percent of these families (i.e. 9 out of 200) carried out paddy cultivation at a commercial scale (i.e. cultivated more than one hectare of paddy land). This was evident from the hidden land tenancies in the village (see Appendix A4.3). The rest of the unsuccessful farming families (about 95.5 percent of them) cultivated either one hectare or (mostly) less than one hectare or not at all (refer to appendix A4.3). These farmers also sold their physical labour as another source of income generation (something which will be dealt with in detail in section 5.3.2).

About 89 percent of the non-farming families (i.e. 72 out of 81) were greatly dependent on selling their labour to farmers in the village. Table 5.2 outlines each sub-case included (i.e. economically-successful and unsuccessful families), their main income generating activities, and resource status (please note that this table does not include information relating to non-respondents).

Table 5.2 : Income-generating activities and the resource status of the studied sub-cases

| Sub-case # | Farming/non-farming family (F/N) | Pluriactive / Monoactive (P/M) | Successful/ unsuccessful? Previously successful (S/U/S/P) | Income-generating activities (pluriactivity) | | Resource status | |
|------------|----------------------------------|--------------------------------|---|---|--|----------------------------|--|
| | | | | | | Family labour availability | Other resources |
| 68 | F | M | S | Paddy, banana and OFC farming, keeping dairy cattle | | 4 | 6 ha paddy land, 1 acre highland, 2 dairy cattle (one of which is an improved breed) |
| 93* | F | M | S | Paddy Farming | | 1 | 5ha paddy land, 0.5 acre high land, two-wheel tractor, 10 buffaloes |
| 5 | F | P | S | Paddy farming, boutique, makeshift tea room, rice processing, carpentry | | 2 | 3 ha of paddy land, 0.5 acre of highland, pair of draught cattle, bullock-cart, bicycle, temporary building in the village Sunday fair (for the maker shift tea room). |
| 9* | F | P | S | Paddy farming, rice processing, rice milling, buying and selling paddy, act as a paddy broker. | | 2 | 1.6 ha, 0.5 acre highland, separate building for rice-milling, rice-mill, rice-processing equipment, motor bike, water pump, pair of draught cattle |
| 12 | F | P | S | Paddy farming, hiring out tractors for both farming and non-farming purposes. | | 2 | 4.4 ha paddy land, 0.5 acre highland, four-wheel tractor, two-wheel tractor |
| 17 | F | P | S | paddy farming, money-lending, hiring out tractor | | 2 | 5 ha paddy land, 0.5 acre highland, two-wheel tractor, motor bike |
| 27 | F | P | S | Paddy Farming, contracting irrigation channel repair maintenance. | | 1 | 2.4 ha paddy land, two-wheel tractor, motor bike, water pump |
| 56* | F | P | S | Paddy and OFC farming, boutique, makeshift tea room, rice mill, making and selling confectionery, short-eats and postal envelops. | | 4 | 1 ha paddy land, 1.5 acre highland (of which 0.5 acre at the women farm and another 0.5 acre as a commercial land), two separate buildings for the boutique and the rice-mill, temporary building at the village Sunday fair; rice mill (borrowed), bicycle. |
| 60* | F+N | P | S | Paddy and OFC farming, leasing and mortgaging paddy land, money lending, buying and selling paddy, hiring out tractor and bullock cart, milk cattle, contracting paddy harvesting | | 3 | 3.4 ha paddy land, 1 acre highland, separate building for storing, buying and selling paddy, two-wheel tractor, four draught cattle and one milking cow |
| 77* | F | P | S | Paddy and OFC farming, rice processing, contracting irrigation channel repair and maintenance | | 2 | 3 ha paddy land, 0.5 acre highland, rice-processing equipment, |
| 82* | F | P | S | Paddy farming, rice-processing, money lending, selling agrochemical and fertilizer, buying and selling paddy, making and selling bed covers | | 1 | 2 ha paddy land, 0.5 acre highland, rice processing equipment, bicycle, sewing machine, permanent building for seasonal buying and selling of paddy and seasonal selling of fertilizer and agrochemical |
| 92* | F | P | S | Paddy farming, rice-milling, hiring out the tractor | | 4 | 4 ha of paddy land, 0.5 acre highland, two-wheel tractor, rice-mill, motor bike |
| 91 | F | P | S | Paddy Farming, milk collecting and rice-processing | | 3 | 1ha paddy land, 0.5 acre highland, rice processing equipment, |
| 95* | F | P | S | Paddy and OFC farming, rice-processing, hiring out tractor, dairy cattle | | 2 | 1.8 ha of paddy land, 0.5 acre of highland, two-wheel tractor, 10 milk cattle |
| 96* | F | P | S | Paddy and OFC farming, money-lending, hiring out tractors, peddler | | 2 | 5ha paddy land, 0.5 acre highland, two two-wheel tractors, push bicycle, five pairs of draught cattle, |
| 112 | F | P | S | Paddy Farming, buying and selling paddy, rice processing | | 2 | 4 ha paddy land, 0.5 acre of highland, rice-processing equipment |
| 122 | F | P | S | Paddy Farming, buying and selling paddy, money-lending, mortgaging land, buying and selling cattle | | 4 | 7 ha of paddy land, 0.5 acre of highland, separate permanent building for string, buying and selling paddy |
| 140 | F | P | S | Paddy Farming, rice-milling | | 4 | 5ha of paddy land, 0.5 acre of highland, rice mill |
| 165* | F | P | S | Paddy and OFC farming, hiring out tractor, rice-processing, contracting irrigation channel maintenance | | 3 | 2ha of paddy land, 0.5 acre of highland, two-wheel tractor, motorbike, 2.5 pairs of buffaloes, water-pump |
| 172 | F | P | S | Paddy Farming, rice-milling and processing | | 4 | 4ha of paddy land, 0.5 acre of highland, rice processing equipment, 2 pairs of buffaloes, pair of milk cattle |
| 250* | F | P | S | Paddy Farming and rice-processing, dairy cattle, contracting irrigation channel repair and maintenance | | 8 | 2ha paddy land, 0.5 acre highland, rice processing equipment, 2 pairs of buffaloes, pair of milk cattle |
| 254* | F | P | S | Paddy and OFC farming, fishing | | 3 | 1.4ha paddy land, 0.5 acre highland, fishing equipment, pair of buffaloes, motorbike |
| 263 | F | P | S | Paddy Farming, boutique, hiring out tractor | | 2 | 5ha of highland, 0.5 acre of highland, separate building for the boutique, four-wheel tractor |
| 271* | F | P | S | Paddy Farming, boutique, rice-processing, vendor | | 2 | 1 ha of paddy land, 0.5 acre of highland, rice processing equipment |

| | | | | | | |
|------|---|---|------|---|---|--|
| 292 | F | P | S | Paddy farming, boutique, ready-made garments, two-wheel tractor | 2 | 5ha paddy land, separate building for boutique, sewing-machine, hiring out tractor |
| 138* | F | M | S | Boutique | 4 | 1 ha of paddy land, 0.5 acre of highland, separate building for the boutique. |
| 24 | F | M | S | Bakery | 3 | 2.8 ha paddy land, 0.5 acre of highland, separate building for the bakery |
| 119* | N | P | S | Paddy farming, dairy cattle, making and selling curd, hiring out bullock cart, goat keeping at a very small scale | 4 | 1ha paddy land, 0.5 acre highland, bullock cart, pair buffaloes, pair of draught cattle, two pair of improved milk cattle, pair of goat. |
| 245 | N | P | S | Paddy farming, hiring out tractor - contracting paddy harvesting | 2 | 3.8 ha of paddy land, four-wheel tractor |
| 288* | N | P | S | Paddy farming, making and selling bed-covers, short-eats, spice packets | 4 | 1ha of paddy land, 0.5 acre of highland, pair of buffaloes, sewing-machine, |
| 61 | N | P | S | Paddy and OFC farming, contracting paddy harvesting, Making and selling short-eats and confectionerries. | 2 | 0.2ha paddy land, 1 acre of highland (of which 0.5 acre at the women farm) |
| 175 | N | M | S | Fishing and selling them | 2 | Bicycle, fishing equipment |
| 6 | F | M | US | Paddy farming | 5 | 4.8 ha of paddy land, 0.5 acre of highland |
| 53 | F | M | US | Paddy farming | 2 | 3 ha of paddy land, 0.5 acre of highland |
| 267 | F | M | US | Paddy farming | 2 | 2 ha of paddy land |
| 2 | F | P | US | Paddy farming, boutique | 2 | 4 ha paddy land, 1 acre highland (of which 0.5 acre commercial land), motorbike |
| 10 | F | P | US | Paddy farming, selling ice-cream (peddler), boutique | 2 | 2 ha paddy land, 0.5 acre highland, push bicycle |
| 79 | F | P | US | Paddy farming, boutique, hiring out tractor | 2 | 4.8 ha of paddy land, 0.5 acre of highland, two-wheel tractor, rice-processing equipment |
| 83 | F | P | US | Paddy farming, boutique, rice-processing, vendor, boutique | 2 | 2 ha of paddy land, 0.5 acre of highland |
| 155 | F | P | US | Paddy and OFC farming, rice-processing, vendor, boutique | 2 | 2 ha of paddy land, 0.5 acre of highland |
| 33* | F | M | PS** | Paddy farming, boutique, selling agrochemical and fertilizer | 1 | 3.8 ha of paddy land, 0.5 acre of highland |
| 253* | F | M | PS | Selling labour | 2 | 1ha paddy land, 0.5 acre of highland |
| 275* | F | M | PS | Paddy farming, dairy cattle and goat keeping | 3 | Paddy land has been morgaged 1 ha paddy land, 0.5 acre highland, five milk cattle and a herd of 15 goats |

Unsuccessful commercial farming families

Previously successful farming families

Demonstration cases (see appendix 5)

Previously successful families

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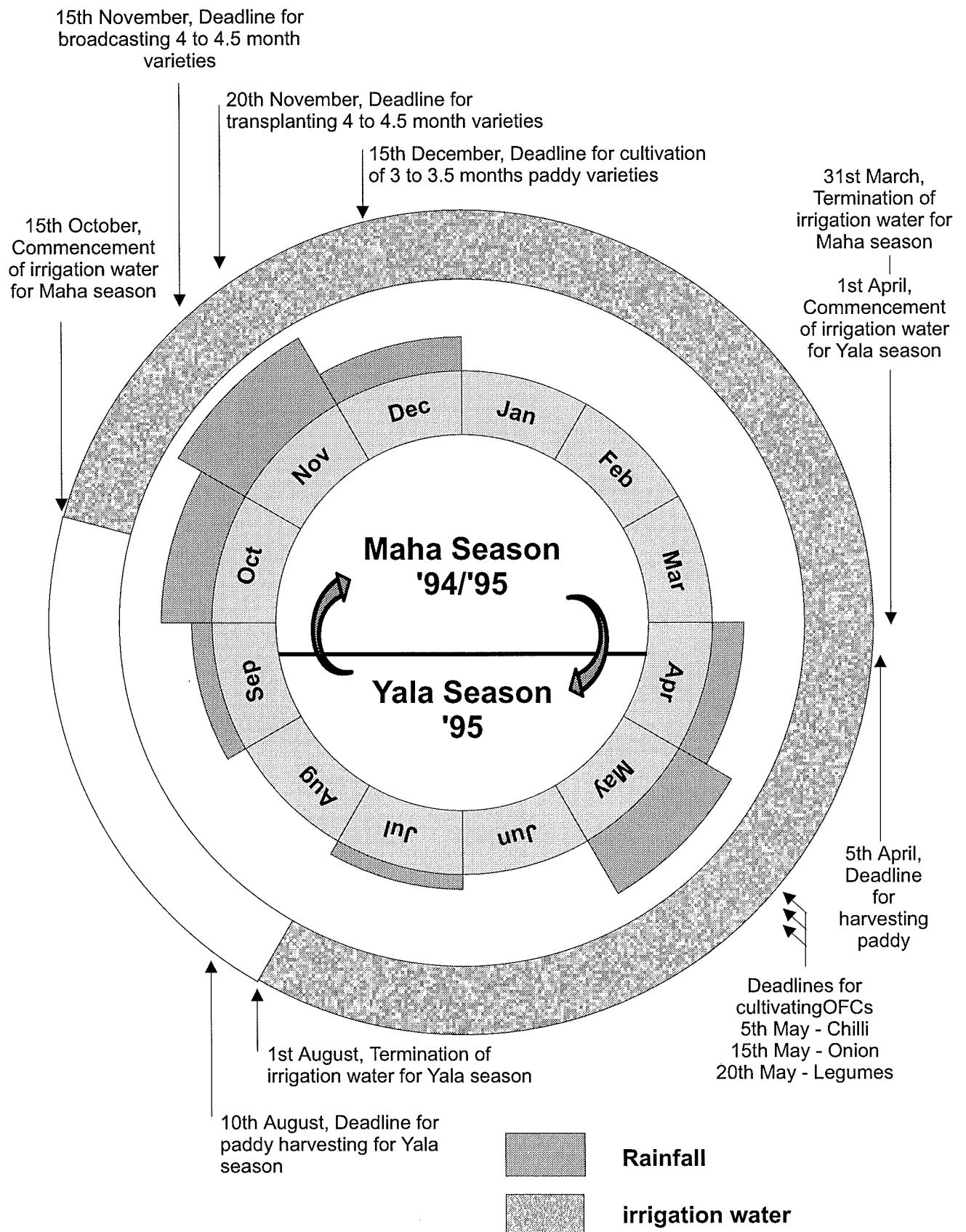
5.2.1 Time constraints: seasonal distribution of rainfall pattern coupled with a cultivation calendar

Chapter Three (sections 3.1.2 and 3.1.3) described how the surrounding environment, whilst creating opportunities, also imposed restrictions on farmers' economic choices.

Chapter One delineated how a lack of water is one of the major determinants of rural poverty in Sri Lanka (as the majority does not have access to water and, hence, is dependent on rainfall). The research strategies adopted to control this variable i.e. the selection of a study site with a year-round irrigation water facility, was presented in Chapter Four. It may be expected, in this setting therefore, that the farmers in the study location were no longer dependent on rainfall for their crop production. However, findings of the study clearly revealed that, although farmers in the location are not dependent on rainfall as a source of water for their paddy production activities, distribution of rainfall is capable of severely restricting the farmers' choices for management decisions (both directly and indirectly).

Farming activities in the location were expected to be carried out to a time schedule (i.e. figure 5.2) by which the irrigation water was released from the reservoirs. This schedule is prepared by the Mahaveli irrigation officials prior to each season. This is formulated by taking into account factors such as seasonal rainfall fluctuations, water capacities of reservoirs and distribution channels, different crop varieties to be cultivated, their water requirements and so on (see Appendix A3.1.5.4).

Figure 5.2: Cultivation calendar for farmers, depicting various other time constraints



The primary objective of this time schedule is to encourage farmers to carry out cultivation programmes for each season in an organized and efficient manner, which on one hand imposes restrictions on farmers' crop management activities (i.e. time constraints - when to carry out cultivation activities etc.) and, on the other hand, facilitates the water distribution activities carried out by the Mahaveli Development Authority.

As has been depicted in the above figure 5.2, each of the two major rainy seasons consist of dry spells as well as rainy spells. For example the Maha season commences towards the end of September and ends towards the beginning of April, which is in turn the onset of the rainfall for Yala season. Likewise in the Yala season, the rainfall is distributed in three time periods i.e. at the beginning, in the middle and towards the end. Each of these rainy seasons lead to dry and rainy spells which impose constraints on:

- (a) a farmer's choice of the selection of crop varieties (i.e. what to produce)
- (b) the timing of cultivation activities (i.e. when to produce).

For example, if a farmer plants a 4 - 4.5 month paddy variety in the middle of December (see figure 5.2), this crop could be harvested somewhere in April but with the onset of rainfall for the Yala season - resulting in crop failure (at the harvesting stage, due to heavy rainfall), leading to either total or partial losses. However, if a farmer plants a 3 - 3.5 month paddy variety in the same period, his/her crop could be harvested towards the end of March and with no damage from rainfall. This is

applicable to other cultivated field crops (i.e. OFC) varieties such as onion. The pattern of rainfall distribution also affects the yield levels. For example, where the pollination stage of the crop coincides with rainfall, the result is a high percentage of empty grains leading to disastrous yield.

Similarly, rainfall distribution also affects the soil moisture conditions, which restrict the farmers choices of “what to produce” (i.e. the selection of crop), “when to produce” (i.e. the timing of cultivation) and “where to produce” (i.e. the selection of land type). For example the heavy rainfall during the onset of Maha season (which leads to boggy soil conditions in paddy lands) makes the commencement of this season (a)unsuitable for cultivating OFC in paddy lands and (b)the most appropriate time period for cultivating OFC in homesteads (as homesteads are not provided with irrigation water).

Furthermore, the seasonal production and rainfall distribution brings, in turn, seasonal fluctuations in pests and diseases. This further emphasises the importance of the production choices i.e. “what to produce” (i.e. the selection of crop varieties which are resistant to pests and diseases) and “when to produce” (i.e. the timing of cultivation activities so as to reduce the potential damage caused by pest and diseases during various vital stages of the crop life-cycle (i.e. Integrated Pest Management).

These constraints have resulted in routine crop production practices by the largest proportion of farmers (in System B) in terms of crop varieties (i.e. “what to produce”), and time of planting (i.e. “when to produce”). In this case paddy more or less

guaranteed at one point in time or another. This confirmed the argument presented in section 3.1.5 that the majority of rural farmers tend to follow routine traditional decision-paths. On the other hand these routines were representative of the production orientation of these farmers (refer to section 3.1.5). This was found to be leading to:

- (a) a seasonal fluctuation of demand for labour.
- (b) gluts in the market during the peak harvesting stage (due to increased supply of paddy in the region).

The national average labour requirement for paddy cultivation is about 124 labour days per hectare (NPFALF, 1994:3). As will be discussed in section 5.3.2, paddy cultivation activities are divided into three consecutive phases. Demand for labour is higher in the first and the third phases (i.e. peak seasons-refer to section 3.1.2). The second phase is usually regarded as the off-peak season. It was found that available family labour was not sufficient to complete the cultivation activities (refer to Table 5.2 for family labour availability of the respondents).

As a result, hired labour was found to be the major labour source during the peak seasons. This confirmed the argument presented in sections 1.2.1 and 1.2.5 that hired labour is the predominant labour form in rural Sri Lanka and the routine practice for the majority of farmers (i.e. how to produce). In addition the other labour types found were (a)contract labour and (b)exchange labour-organised by a minority of entrepreneurial farmers. Farmers in the village were mainly dependent on the villagers for labour, with limited use of migrant contract labourers. It was observed,

during the field study, that the supply of labour was not sufficient to fulfil the demand of farmers. Unsuccessful farmers (who had a higher bargaining power for their labour) were busy in selling physical labour during the peak seasons (see section 5.3.2). This resulted in their inability to adapt to the time constraints and hence leading to crop-failures (mainly in terms of poor quality produce such as a high percentage of empty grains or poor keeping-quality due to a high moisture-content).

5.2.2 High cost of production

Sri Lanka has been noted as the highest cost producer of paddy under irrigated conditions within selected countries (NPFALF,1994). The national average cost of production at the time of the field study has been estimated as RS. 9900/acre (about RS 24,750/hectare). Of this, labour constituted about 60% of the total cost of production (i.e. an average of 124 labour days per hectare per season @ RS 100 per labour day in the study area). The other input costs such as fertilizers, herbicides and pesticides accounted for less than 30% of the total cost (NPFALF, 1994:4).

After analysing data from seventeen seasons, Weerahewa and Abeygunawardena (1989) concluded that profit margins as well as the income received by farmers from paddy are decreasing mainly due to low paddy prices and high input cost, aggravated by the removal of a fertilizer subsidy. In fact this was borne out in general by opinion-sampling during the period of the field-study. Although a 30 percent subsidy on fertiliser was reintroduced by the People's Alliance (PA) government at the beginning of the field research, it was withdrawn towards the end (of the field research, that is).

Using the national average yield of paddy per hectare (i.e. 3500kg/ha -NPFALF, 1994:3), the total income which could be earned by a farmer who receives the average yield at the rate of GPS (i.e. Guaranteed Price Scheme of RS 7.42/kg) is RS 25,970. As a result, the total profit would be RS 1220/hectare. However, this ideal case does not apply in reality because not every farmer receives the average yield. Neither can everybody sell their produce at the GPS (this is dealt with in section 5.3.3). Furthermore, not everybody incurs the national average cost of production (i.e. RS 24,750/ ha) either, due to varying types of labour and varying degrees of agrochemical/fertilizer usage.

The following example (i.e. figure 5.3) indicates how this relates differently to two respondents i.e. one who obtained the highest yield (case 165) and the one who obtained the lowest yield (case 14).

Figure 5.3: The highest yield, the lowest yield and profit

The highest recorded yield among the respondents during the field study was Kg 3520/ha by case 165 and the lowest yield was about 2200 kg/ha by case 14. Case 165 had grown a mix of both high-value varieties (i.e. one acre) and low-value varieties. He sold part of the low-value varieties at the GPS (through contacts within the allocated quota) and stored the rest for selling at higher prices at a later date. Furthermore he was capable of selling the harvest of high-value variety at RS 8/kg (which he said was enough to cover the cost of production in the first two phases of paddy cultivation). In addition he used labour saving strategies (exchange labour etc.) which reduced the cost of production considerably resulting in a higher return than the above ideal case. Case 14 worked as a labourer during the initial stages of the first phase of paddy cultivation. The result was delayed cultivation. He employed mainly hired labour leading to high costs of production. He never used the recommended amount of fertilizer (applied amount was far below the recommended level). The result was low paddy yield which was also spoiled by the onset of Yala rainy season. This forced him to sell his low quality paddy to a rice mill owner in Polonnaruwa at RS 5/kg. He never wanted to grow high value varieties thus by complying with the perception of the majority of villagers that this variety gives relatively higher empty grains. The final result was returns falling far short of the aforementioned ideal case.

5.2.3 Limited marketing alternatives for paddy and their imperfections

By confirming the theories reviewed in section 3.1.2, it was observed that the paddy prices drop drastically during the harvesting season. During the field-work it was observed that the prices received by different respondents varied between RS 5.00 at the harvesting phase and 6.20 later on (the national average of this drop is about 20 % of the usual market price- NPFALF, 1994). This was caused by the formation of seasonal gluts in the market caused by routine crop production practices of the farmers (see section 5.2.1). Consequently, an agricultural market structure has developed where middlemen and/or traders take an unjust share of the surplus paddy, which they resell and/or reprocess through various value adding processes, to extract a larger share of profits in the production to consumption chain of paddy.

The best paddy-marketing alternatives for farmers in the location with the highest farm gate prices (RS 7.42 per Kg of paddy) were the Paddy Marketing Board (PMB) and the Multipurpose Cooperative Shop. Therefore, it might be expected that all the farmers would sell their produce to these two institutions (i.e. PMB and Co-op). However, this was not the case in the village.

The limited quantity of paddy purchased (according to a quota system) by these two institutions was required to be of a higher quality in terms of low moisture content, absence of empty grains and impurities etc., which required farmers to pay an extra attention (in terms of extra labour and time) and also to incur an extra cost mainly at the post harvest preparation stages. Most of the unsuccessful farmers were either unable to fulfill or were not willing to fulfill these requirements. However, attaining



At the Paddy Marketing Board buying centre



Selling paddy to a trader

this higher quality did not guarantee that farmers could sell their produce to these institutions. This was due to the inefficient and the insignificant roles played by these two institutions in purchasing paddy. This inefficiency, in particular, led to the formation of long queues. Farmers themselves had to transport their paddy to their purchasing centers (which also required extra time and money) and commonly had to queue for more than a day. This also brought the risk of their produce being exposed to rainfall whilst in the queue.

A limited amount of cash was paid to the farmer upon the delivery and the rest was to be paid at a later date (with possible delays) through banks. Furthermore, farmers often complained about the bribery and corruption (i.e. cheating by weights) associated mainly with the workers of PMB purchasing centers (see Lundquist, 1978 for similar findings in System H of AMP).

As a result, purchasing of paddy in the area was dominated by the private traders (both large scale rice mill owners and middlemen) who came mainly from Polonnaruwa, a major nearby town. Generally, farmers sold their produce (after keeping a certain amount for home-consumption and to sell/barter in small amounts during the off-season to meet their day-to-day cash requirements) to these private buyers just after harvesting. This was mainly to obtain cash for settling their previously-obtained credits from money-lenders and boutique-keepers in the village (this is discussed in section 5.3.2). The prices paid by these traders were found to be considerably lower than those prices paid by Co-op and the PMB. Unlike the above two institutions, these traders came and bought produce at farmers' premises - or even

in the field - with cash. Furthermore, there were no limits to the quantity purchased or to the quality of the produce (thus making this the most practical alternative for selling their paddy). On top of the low prices, farmers very often complained that these traders are involved in cheating them by weights (see Lundquist, 1978 for similar findings in System H of AMP). Cheating was predominately associated with the most vulnerable farmers (who in most of the time sold their paddy in their fields). As a result, some farmers (i.e. mainly the farmers with a better bargaining position) used their own (or borrowed from a fellow villager) weighing scales when selling their produce.

It was also found that these traders in Polonnaruwa made organized attempts (mainly by acting as middlemen) to prevent traders coming from distant areas such as Kurunagala, Kuliyapitiya, Marandagahamula etc. and buying paddy directly from farmers at a relatively higher price (the maximum price observed during the fields study was RS 6.20 offered by a trader form Kuliyapitiya to case 12 for his previous season's produce). This was possible because one of the two main roads to the System B (from outside areas) runs through Polonnaruwa (so that they could stop and sell the paddy bought by them to outside traders coming into system B). This clearly demonstrated the imperfect nature of the prevailing paddy marketing system in the area, which further reduced the prices (on top of the usual reductions caused due to the formation of gluts in the market) leading to low profits. Given the lavish behaviour of the majority of the farmers (as will be dealt in section 5.3.2), their price-taking nature (as was argued in section 3.1.5), and the inefficiency and insignificant

role played by the government (i.e. PMB) in purchasing paddy, buying paddy at such a low price (i.e. RS 5 per kg of paddy) was not a difficult task for middlemen.

The other major marketing alternative available for farmers in the village was to use the entrepreneurial paddy buyers in the village itself. These buyers were acting as middlemen between the farmers and the outside traders. This marketing alternative appeared to be popular among the most vulnerable farmers in the village, due also to the other advantages associated with it such as possible advance payments (in terms of high interest credit) and a lack of cheating (refer to cases 56, 82, 92 for example).

On the whole, selling of paddy by the majority of villagers to the above traders/middlemen just after harvesting formed two other major routine practices in terms of ‘who to sell to’ and ‘when to sell’.

5.2.4 Government’s solutions to the low profitability of paddy: production oriented extension and support services

Despite the complex nature of the problem, the advisors to the government have simplified the reasons for the low growth of the paddy sector (i.e. the low income received by paddy farmers) as (a)stagnant yield, (b)low cropping density (c) inadequate availability of certified seed, (d)the tendency of farmers to cultivate short-aged varieties (i.e. maturing at 3 - 3.5 months of age) rather than relatively high yielding and long-aged (i.e. 4 - 4.5 month) varieties, (e)the high cost of production, (f)the dropping of paddy prices by 20 percent during the harvesting season, and (g)farmers not diversifying into other areas (NPFALF, 1994:3). Furthermore, they

recommend the following policies (figure 5.4) to overcome this problem. These factors clearly demonstrate the government's and its advisers' production orientation. Their solutions, given below (in figure 5.4), contrast with the theories reviewed in section 3.1.6.

Figure 5.4: The government's production-oriented solutions for the low-growth in the paddy sector

- “1. Rice yield would be increased to 4.5 metric tons/ha in the short term to meet the demand through a package of practices i.e.**
- (a)Increasing the supply of seed paddy, preferably of long-aged varieties from the present 4% up to 10%.
 - (b)Increasing cropping intensity, by expanding water management programmes through rehabilitation of minor tanks and utilisation of ground water resources.
- 2.High cost of production would be reduced by the use of the following cultural practices (a 30 percent fertiliser subsidy has been already announced by the government effective from the 1994/95 Maha season).**
- (i)Integrated pest management (IPM).
 - (ii)Integrated nutrient management, use of organic materials, straw recycling to minimise the use of potassium.
 - (iii)Use of straight fertilizers instead of mixtures and use of fertilizers based on soil testing.
 - (iv)Timely water issues in both minor and major irrigation schemes.
 - (v)Recognition of the extension service.
- 3. Marketing, storage and processing of paddy would be streamlined, and the following strategies are recommended.**
- a. The present system of purchasing paddy by the PMB be continued.
 - b. “Bonded stores” where banks provide cash to farmers on interest be pursued.
 - c. Par-boiling of paddy by farmers to improve both quality of the rice and farmer income be encouraged.
 - d. Farmers’ organizations undertake production, storage, processing and marketing. Input supplies and credit be organized through farmer organisation and farmer groups.
 - e. Value-added products such as rice flour, convenience foods for urban markets etc. be encouraged.
 - f. Future policy in wheat imports and subsidies should be studied particularly in view of the GATT agreements.
- 4. R & D should focus on breeding of high yielding rice varieties suitable for different agro-ecological regions” (an extract from the National Policy Framework Agriculture, Lands and Forestry-Ministry of Agriculture, Lands and Forestry, Sri Lanka, 1994: 3-4)**

As far as the study location is concerned, this production-orientated advisory and support policies are clearly demonstrated by the MARD project's attempt to encourage the farmers to diversify into other OFC varieties.

The following quote further illustrate this point.

“Irrigated agriculture in Mahaveli System B is dominated by paddy production. The Mahaveli Authority developed one hectare fields for allocation to settlers with the original objective of sole production of paddy. The irrigation system was designed with the intention to supply water for production of this crop.”

*“The purpose of the MARD project is to increase the return from land and water resource in System B through **crop diversification** of irrigable land. As this in contrast to the original objectives of the system B agriculture, MARD project staff, with support from the Mahaveli Economic Agency, have perceived the need to illustrate to farmers in System B the economic advantages of diversification”* (Gleason et al, 1994).

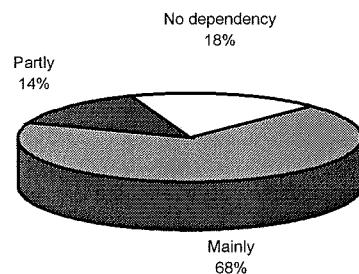
The major emphasis of extension and support services in persuading farmers to cultivate OFC clearly demonstrated their production-orientation i.e. emphasizing “what to produce”, without any regard to other relevant environmental conditions or their implications for the ongoing economic success of the farmers (i.e. trying to explain the reasons for economic failure in terms of crop cultivated). Furthermore, as figure 5.4 demonstrates, these advisory and support service packages came with instructions on (a)good crop husbandry practices (which again focusing only on the technical/agrinomic aspects of “how to produce”) and (b)how much of each crop variety should be produced. This emphasis is politically driven and neither recognizes the farmers’ capabilities nor their resource limitations, highlighting a mismatch between the grass- root level which extension officers aimed to meet and the loftier targets set by senior officials. The survival and job security of junior officialdom are dependent on the progress of the farmers in terms of which crops are cultivated. Progress reports are then submitted to relevant third parties such as higher officials, donor agencies and so on (see Siriwardena, 1989 for Similar findings in System C of AMP).

Nevertheless it was observed that the majority of the economically-successful farmers made their own sensible decisions (which will be dealt with in Chapter Six) whereas in contrast poorer farmers blindly followed these “success recipes”. How these production-orientated success recipes led a successful farmer (who became economically-successful entirely from paddy cultivation) to a disastrous situation is illustrated in Case 33 (see Appendix 5).

5.3.1 Paddy and village dependent other income generating activities

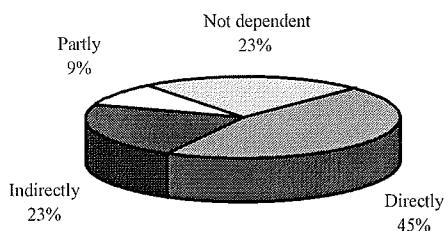
Part 5.1 presented the other income-generating activities in the location. This made clear that about 81 percent (i.e. 18 out of 22) of the main income-generating activities were completely or partly dependent on the village as the sole customer base (figure 5.5).

Figure 5.5:Village dependent income generating activities



Moreover, the findings indicated that about 77 percent of these income generating activities were also paddy-related - directly, indirectly or partly. This also demonstrated that the functioning of the village economy is centered around paddy cultivation (Figure 5.6).

Figure:5.6: Paddy dependent income generating activities



5.3.2 Limited availability of paddy and village-dependent opportunities for other business activities caused by routine behaviour of the economically unsuccessful farmers

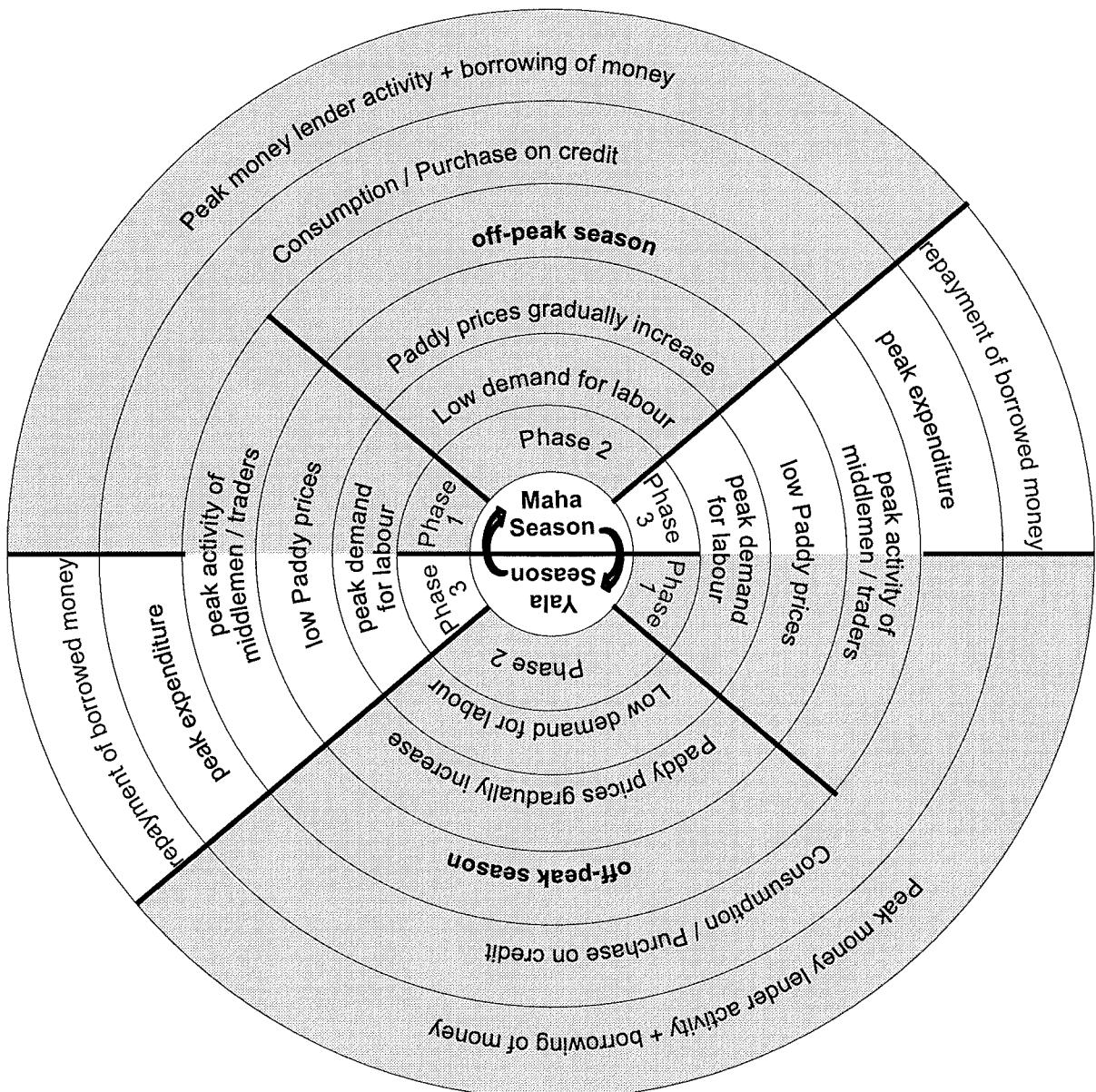
The opportunities for most of the off-farm income-generating activities in the village (refer to Table 5.1) were found to exist mainly as a result of the prevalence of certain routine paddy dependent socio-economic activities (see Siriwardena, 1989:239 for similar findings in System C of AMP).

As has been illustrated in Figure 5.7 (and also indicated in the section 5.2.1), paddy cultivation practices in each season could generally be divided into three major routine phases viz.: (1)land preparation² and planting³, (2)agricultural practises and (3) harvest and post-harvest preparation activities. The first and third phases usually generate a high demand for labour and farm power (during peak seasons)⁴, whereas the demand for such in the second phase (i.e. crop establishment to maturity stage)⁵ is very low and thus this phase is regarded as the off-season (with abundant waged labourers).

During the first and the third phases, the majority of inhabitants in the village (i.e. the economically unsuccessful category) were engaged in selling their labour. Hiring out tractors and draught animals were also major farm-related business activities in these two phases. Moreover, demand for baked products (mainly bread) was also found to be relatively higher during the first and the third phases when farmers had to buy them in order to offer meals to their labourers. It was stated by both of the bakery owners in the village that demand for their products during the off-seasons are relatively low.

The third (i.e. harvesting) phase was also the period for peak expenditure of the villagers. This phase was dominated by their lavish buying and consumption behavior (see Lundquist, 1978 for similar findings in System H of AMP). As a result, village boutique keepers faced a relatively high demand in both the range (i.e. luxury food items such as eggs, tinned fish, etc.) and the quantity of products sold during this phase (as demonstrated by consumption on cash). However, the boutique owners were not in a position to take full advantage of this increased demand since the majority of the villagers became mobile and did shopping in nearby towns (see Lundquist, 1978 for similar findings. In System H of AMP). At the same time, the activities of traders and middlemen (both outsiders as well as villagers) came to a peak during the harvesting phase when they were earnestly engaged in buying produce from the majority of the farmers (see Siriwardena, 1989 for similar findings in system C of AMP).

Figure 5.7: Paddy related socio-economic activities, which have created opportunities for other business



Cash based business activity



Credit based business activity

The harvesting phase (i.e. the third phase) was followed by a “consumption/ transactions on credit” phase, extending through to the subsequent first and the second phases. Hiring out tractors or draught animals, and also boutique business during these phases, was carried out on credit. This was also the time (particularly the first phase) in which money-lenders in the village faced a heavy demand whilst majority of the villagers were in need of cash for starting cultivation activities for the next season (in a setting where formal credit facilities were highly geared towards a minority of creditworthy farmers). This lack of working capital during the initial phases (aggravated by lavish consumption behaviour) of paddy cultivation activities prevented considerable number of farmers from applying the required amount of fertilizer and other agrochemical which, in turn, has detrimental effects on yield levels of cultivated High Yielding Varieties (HYV). Some entrepreneurs in the village capitalized on this opportunity to provide agrochemical to these needy farmers on the agreement that they would pay them back with interest (e.g. case 83). These consumption-on-credit activities usually ran through to the next harvesting phase.

Most of the income generating opportunities were therefore (a) paddy-related (which is an inherently unprofitable activity - see sections 5.2.1 and 5.2.3) and (b) dependent on the families in the village as the sole customer-base. Seasonality of income has led to a situation where almost all the business transactions (i.e. other income- generating activities) are carried out on credit basis (see Figure 5.7). As a result, village business-operators were exposed to a high risk of defaults. At the same time, the routinely lavish consumption and buying-behaviour of the economically- unsuccessful inhabitants - coupled with their mobility in the third phase of paddy cultivation (see



A village boutique owner's attempt to benefit from majority's lavish buying behaviour during the harvesting phase, by introducing ready-made garments



Differred gratification (case 245)-at the right hand side is the mud wall house and at the left hand side is the brick wall garage for his tractor (which is to be developed later into a house)

section 5.3.2) - led to a significant seasonal outflow of monetary resources (in terms of paddy and money which otherwise would have been retained and re-invested in the village) from the village. All these represented the major constraints to the growth of the other income-generating activities (i.e. non-paddy) in the village.

5.4.1 Summary and theoretical implications

It may be argued that the study village represents a micro-export-import economic system which mainly produces paddy for (and imports a whole range of commodities from) outside markets. It was found that the village socio-economic system is entirely centered around seasonal paddy cultivation activities. Subsequent analysis indicated that the majority of (a)economically-successful farmers are pluriactive (centered around paddy cultivation), and (b)economically-unsuccessful farmers are monoactive (i.e. paddy farming only).

Moreover, the analysis demonstrated the unprofitable nature of paddy cultivation due to the high cost of production, exploitation by middlemen, and aggravation by limited resources (i.e. ownership and the availability of land labour and capital⁶) as well as various time constraints imposed primarily by biophysical environmental factors.

Subsequent analyses revealed that other available-but-limited income-generating activities are also paddy-related (section 5.3.1) and are dependent on the families in the village (section 5.3.2) as the main customer-base. Analysis also made it clear that these income-generating activities are based on seasonal credit transactions, exposing business-operators to high risk of defaults. It was also argued that exploitation by middlemen and the lavish behaviour of the majority of economically-unsuccessful farmers are causing a significant seasonal monetary outflow from the village. Therefore paddy (an inherently unprofitable crop) and village dependency on other income-generating activities are the major constraints for the growth of these businesses.

This analysis, whilst delineating the above major constraints and their influences on economic growth, also demonstrated how the pressure exerted by various biophysical environmental constraints (centered around rainfall distribution), whilst restricting the farmers' choices of action, has forced the economically-unsuccessful farmers to form a cycle of routine socio-economic activities which are centered around seasonal paddy cultivation activities (Figure 5.7). This routinely (Bryant, 1989) 'vicious cycle' was production-oriented (see section 3.1.5) farming (see Table 5.3), and culminated in consumption (i.e. including the seasonal lavish behaviour) activities.

The eventual result of these routine activities is crop-failure followed by economic failure (i.e. failure to create and accumulate wealth). This is mainly due to their inability to adapt to the various constraints imposed by the surrounding environment, and is characterized by inefficient and ineffective resource uses (both production and consumption activities) leading to the misallocation of resources (see Casson, 1982-section 2.6).

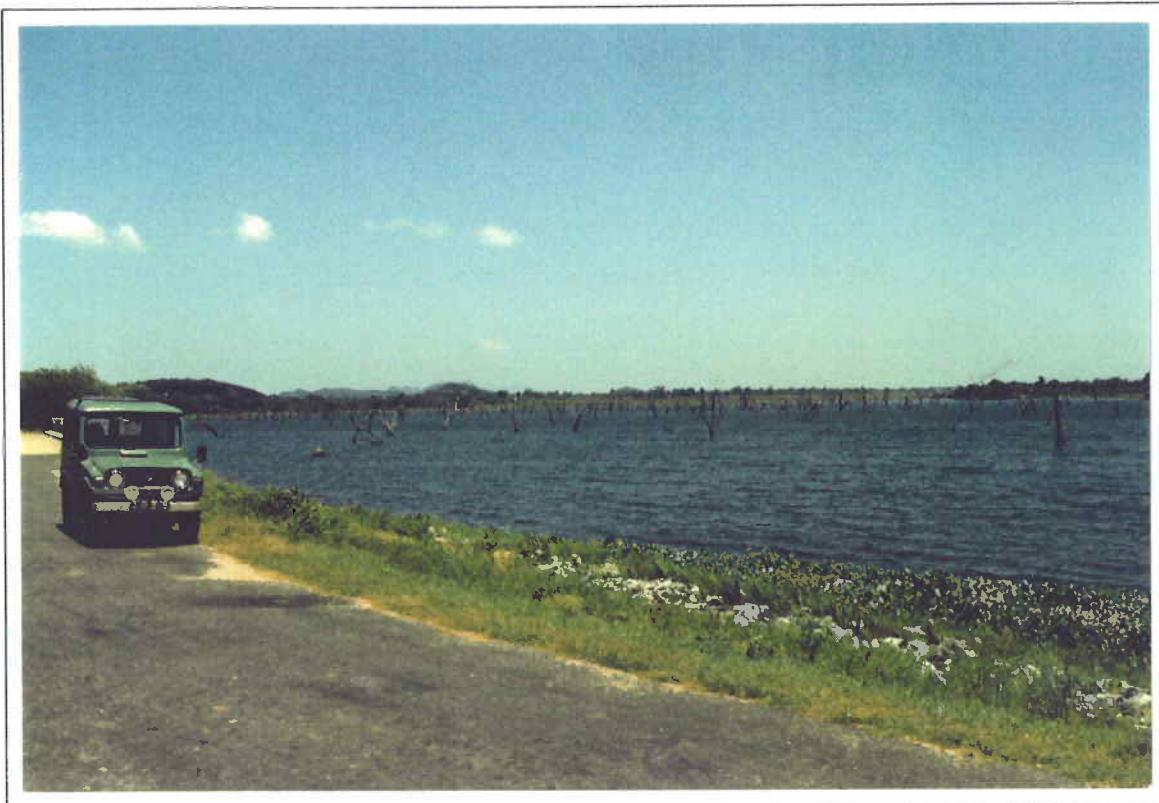
As was argued in section 2.6, it was found that the availability of these unsuccessful farmers has provided opportunities for entrepreneurial farmers to extract value from (a)paddy cultivation through coordinating/mobilizing these misallocated resources (both land and labour) and (b)diversifying into other income- generating activities. The former was clearly evident from successful farmers cultivating more than one hectare of paddy land (i.e. hidden land tenancies - see appendix A4.3), and the latter was evident from the existence of pluriactivity (see section 5.1.2).

Table 5.3: Routine production and marketing activities of the economically-unsuccessful farmers

| Routine production and marketing activity | Nature of the routine activity |
|--|--|
| What to produce (selection of crop) | Majority cultivated long-age paddy varieties (refer to figure 5.4). No sensible decisions are made about what paddy varieties to cultivate (just following the majority). Cultivation of OFC varieties - as advised by extension services. |
| How to produce (method of cultivation) | Using hired labour, tractors and buffaloes on credit. Agrochemical usage is depending on the availability of working capital (OFC - as advised by extension services). |
| When to produce (time of cultivation) | After finished selling their labour (therefore lagged behind the cultivation calendar - see Siriwardena, 1989:96 for similar findings in System C of AMP), often leading to crop failures (OFC-as advised by extension services). |
| When to sell (time of selling) and at what price | Just after harvesting (the lowest possible price). |
| Who to sell to | Middlemen and traders (no specific choice). |
| How to sell | Mostly in the field itself, or in their houses (middlemen /traders come and buy). |
| How much to sell at each selling option | A larger share of the harvest is sold to one buyer after keeping a small share for home consumption or to sell when need arises (mainly to buy day-to-day consumption needs). |

On the whole, the concentration of these routine crop-production and marketing activities, as well as the limited variety of paddy-dependent income-generating activities within a highly constrained environment, indicated an apparently uniform context with little visible evidence of differential activities. This uniformity has been further reinforced due to the fact that these economic activities are firmly embedded in the monoculture of paddy (see Figure 5.7). In fact this may be the first impression of any external observer of the village. Given the paddy-dependent cycle, the limited market opportunities, and the apparent paucity of income-generating activities, it is perhaps not surprising that the external observer should see uniformity in the inhabitants' windows of opportunity. In contrast, Chapter Six presents and analyses the differential value-extraction processes adopted by economically-successful farmers and their relationship to entrepreneurial and managerial processes.

Apparently Uniform context



Village tank



Diversity within the apparently uniform context

¹Please note that inhabitants who engage only in farming (paddy, OFC and animal farming) are considered as "monoactive" (i.e. farming).

²Clearing of distributory and field channels, bund preparation, first & second ploughing and levelling of land.

³Seed broadcasting or transplanting of seedlings.

⁴i.e. draught cattle and tractors.

⁵This represents the planting to the pre-harvesting stage. Main activities carried out in this phase are weeding, application of agrochemical and water & pest management. These activities demand a relatively low number of labour days.

⁶As a result of low profitability of paddy.

CHAPTER SIX

Processes Of Value Extraction

6. Introduction

The previous chapter outlined the environmental context within which farmers operate. It also highlighted the uniformly routine socio-economic activities of the economically-unsuccessful farmers. The main aim of this chapter is to analyse the non-routine socio-economic activities of economically-successful farmers which represent diverse value-extraction processes. This is in order to demonstrate that the economic behaviour of economically-successful farmers differs from economically-unsuccessful farmers. Consequently, these analyses will be aimed at answering the research questions singled out in the section 3.2.1 in particular:

- (a)What entrepreneurial activities/processes could be observed in the study location, and how do they contribute to the creation and accumulation of wealth?
- (b)What managerial activities/processes could be observed in the study location, and how do they contribute to the economic success?
- (c)What is the relationship between these two processes in the total business towards determining the economic success of farmers?

This chapter consists of four parts. Part one, based on the empirical findings, argues that there are two main routes of value extraction i.e. entrepreneurial and managerial. Part two analyses the entrepreneurial value-extraction processes, and part three focuses on the managerial value-extraction processes. The final part introduces the term “entrepreneurial matching process”, and argues that both the entrepreneurial and

managerial value-extraction processes play interdependent and complementary roles in determining the economic success of farming families. The chapter concludes by indicating some of the important personal attributes possess by economically-successful farmers.

6.1.1 Extraction of value: need for adaptation to the environment

Chapter Two (section 2.2) delineated two main views of entrepreneurial value extraction i.e. extraction of values through (a)changing the conditions in the environment and (b)adapting to the changing conditions in the environment. Chapter Two also argued that different forms of entrepreneurial processes in varying environmental settings may be observed. The previous chapter noted that villagers mainly produce paddy for the external market, which is a primary agricultural product. The individual farmer produces a small quantity of the total market supply. They do not have contacts with the final consumer (Meulenberg, 1986). Therefore they “price-take” (Blobaum, 1987; Meulenberg, 1986; Wossink, 1990; Giles, 1990; White, 1989) both for inputs and outputs. These farmers are at the disadvantage of market imperfections (sections 5.2.2-5 2.3). All these result in a high cost of production and low prices, leading to low profits. Their survival is primarily dependant on the success of paddy farming (their main livelihood), which is basically governed by how well these farmers could adapt to the various time constraints imposed by the surrounding biophysical environment (section 5.2.1). This in turn brings greater challenge for them, as this adaptation has to be achieved within a limited volume of physical resources (i.e. land, labour and working capital).

They are under constant pressure to change their basic crop-management practices including the cultivated crop varieties (section 5.2.3). However, achieving farming success (i.e. obtaining a high yield) does not guarantee the economic success of farmers since they also have to adapt to various other market constraints (see sections 5.2.3). These immense environmental pressures may be described as “environmental

dictatorship". This is because the environment, to a large extent, dictates how a farmer should behave to survive or to achieve subsequent economic success by accumulating wealth. The need for farmers to adopt adaptive value-extraction processes has created two main types of inhabitants, viz.: (a)economically-unsuccessful inhabitants who have failed to adapt to the surrounding environment, and (b)economically-successful inhabitants (i.e. entrepreneurs) who have accumulated wealth through adapting to the environment .

6.1.2 Entrepreneurial versus managerial value extraction processes

This provides confirmation of the argument presented in Chapter Two that "the organisations that are well adapted to their environment will survive, and those that are not will die" and also that survival and the subsequent success of the farm is determined by its adaptability to changing conditions in the surrounding environment (presented in Chapter Three). It therefore follows that there is a commonality between the two streams of reviewed theories i.e. entrepreneurship (see Chapter Two) theories of economic success (see Chapter Two)and theories of economic success of the small scale LRF (see Chapter Three).

It is clear that both these two theoretical streams focus on the processes of value (i.e. wealth) extraction. Chapter Two took a general view as to how values are extracted from the surrounding environment, by perceiving opportunities and capitalising on them. Chapter Three, whilst discussing the unique aspects of the farmers' surrounding environment, delineated how the small-scale LRF could extract values from the environment by adapting to it. Chapter Three also revealed that they have limited

capabilities to adapt to the environment. It appears therefore that both these streams of theories use the same language i.e. adaptation, opportunities, constraints and resources. This in turn raises the question “why do we need two streams of theories in researching the economic success of farmers?”.

The answer to this question is provided by the reviewed theories themselves.

Although entrepreneurial process is concerned with extraction of values by adapting to the environment, it also involves discovering/creating new opportunities (i.e. creating new values) and also overcoming the constraints (rather than working within the existing constraints). This phenomenon was clearly evident from the empirical findings. In contrast, the management process (also confirmed by the empirical findings) is concerned with how the maximum value is extracted within the existing constraints. This is by means of efficient and effective allocation of resources, but they are subject to environment/ market constraints.

6.2.1 Entrepreneurial value extraction without regard to the resources under control

It was argued in Chapter Two that resources are the major limiting factor to economic growth. Consequently the major theme of this thesis has been how these farmers achieve economic success by discovering/creating new opportunities and pursuing them without regard to the resources under control (Chapter Two, section 2.4.2).

Availability of limited physical resources was highlighted as one of the major constraints faced by these farmers. This holds true for individual farming families as well as for the village as a whole (refer to Chapter Five). Empirical findings clearly demonstrated that a myriad of entrepreneurial strategies are adopted by the entrepreneurs in order to extract values. These strategies were indicative of the theme that “the entrepreneurial process involves pursuing opportunities without regard to the resources which the entrepreneur currently controls”. Thus augmenting the resource base, which in turn expands the boundaries of the existing resource limits (through accumulation), allows yet more opportunities to be pursued. This confirms the previous rationale that the entrepreneurial function cuts across the existing boundaries of management demands by surpassing the limits of the resources (physical and otherwise) owned/under control (see section 2.4.2).

6.2.2 Pursuing opportunities regardless of the resources under control: extraction of value through social networks

As argued in Chapter Two (section 2.4.4) this is done by mobilising resources through social networks, both among the aspiring entrepreneurs (within and outside the

village) as well as between the entrepreneurs and the fellow needy villagers. Empirical evidence (based on the case study materials presented in Appendix 5) which supports this phenomenon is summarised in the table 6.1.

This function helps to overcome the following major constraints:

- (a) Resource constraints (both physical and otherwise e.g. knowledge)
- (b) Product market constraints (middlemen exploitation, price fluctuation, low inherent prices)
- (c) Factor market constraints (cost and availability)
- (d) Local environmental constraints (low opportunity, high risk of defaults).

Table 6.1 Pursuing opportunities by mobilising resources through social networks

| Case(s) | Capitalised opportunity | Nature of resource mobilisation |
|-------------|--|--|
| 82 | commencement of buying and selling of paddy business | Brother's experience (knowledge) about market conditions and also his contacts with buyers. |
| 82 | commencement of the agrochemical and fertilizer-selling business | Using a social contact (i.e. a trader) to purchase these inputs on long term credit. |
| 82 | money-lending | Borrowing money from banks at a lower rate and lending them at high interest rates, which provides the opportunity to invest own money in other gainful activities (i.e. to avoid resource conflicts) |
| 56 | introduction of bicycle spare-parts to the boutique customers | Using a social contact (i.e. a trader) to purchase expensive spare parts on long term interest free credit (overcoming capital constraints) |
| 60, 82 | money lending | Exchanging (a) each other's experience on creditworthiness of new customers and (b) trustworthy customers |
| 56 | commencement of the rice-milling business (introduction of a modern technology to the village) | Using a social contact to obtain the rice-mill on a no-obligation loan (with the promise of transferring the ownership with the success of the venture), which also helped them to overcome the capital constraints and collateral requirements . |
| 250 | reduce the cost of paddy cultivation (field canal society-see case 250) | Co-ordinating the labour/draught cattle exchange arrangements among the members of field canal society, which helps overcoming social constraints to adapt to time constraints (by way of adopting timely cultivation) also by reducing the cost of production in terms of (a)obtaining free labour/and farm power (b)purchasing agrochemical and fertilizer at discounted rate with free transport facilities (through bulk purchasing from a known trader) This also has links with "Samagi farming society" |
| 77, 165,250 | (1)exchange labour, draught cattle arrangements (2)subcontracting irrigation channel maintenance in adjoining villages (refer to case 77) (3)subcontracting irrigation channel maintenance in the own villages (refer to case 250) (4) "Samagi" farming society (refer to case 250) | (1) each others family labour and buffaloes in order overcome working capital requirements, to reduce cost of production and also to adapt to the time constraints by overcoming shortages of labour. (2)social contacts with Mahaveli officials to obtain sub contracts in adjoining village; physical labour of needy inhabitants (with low opportunity cost) in respective villages both in order to overcome hostility and working capital requirements. (3)co-ordinating the physical labour of needy members of the farm organisation (with low opportunity cost) in order to gain extra income also eliminating payment of the membership fee (4) co-ordination of needy friends mainly to overcome the working capital requirements for paddy cultivation, later diversified into (a) cost reduction strategies such as bulk purchasing of fertilizer and agrochemical at a discounted rate with free transportation facility and (b) shock absorbing mechanism by forming a branch to aid funeral arrangements (Also horizon-enlarging pluriactivity-synergetic effect of two societies) |
| 60 | contracting paddy harvesting in the village | co-ordinating a group of needy villagers (i.e. non-farming families) to contract paddy harvesting. This helps (a)to curtail the cost of own paddy harvesting and (b)to increase the income also by avoiding resource conflicts with hiring out the tractor. (Exchange of values also within the family) |
| 77, 92,93 | delayed selling of paddy in order to take a higher price | Use of social contacts (i.e. traders) to overcome (a) lack of storage facilities and/or the risk of pest attacks (i.e. rat infestation) and (b)middlemen exploitation |

| | | |
|---------|--|---|
| 60, 96 | 93, Reducing the cost of land preparation by having own draught cattle | getting a needy villager/friend to look after and hire out cattle and retain the income with them (which reduce resource conflicts with other activities) |
| 92 | Starting wholesale business to boutique keepers in the village. | Using existing contacts (with whole sale traders) to obtain goods (at a wholesale scale) on interest-free credit in order to sell to newly-emerged village boutique owners (this also helped him to overcome competition i.e. extracting value from competitors) |
| 93 | Selling paddy to Co-op at Guaranteed Price Scheme | Using the quotas of fellow villagers who failed to meet the quality parameters (mobilised both quotas and social contacts with them) |
| 96 | Unusual Land tenancy | Mortgaging the lands from needy villagers and giving them to entrepreneurial farmers in the village on “one third basis” (extracting values through other progressive farmers as the interest for mortgaged lands while overcoming resource conflicts and risk of failure of own paddy cultivation activities) |
| 119 | Village milk collecting centre (creating a sustainable market opportunity) | Using the GN to organise the village milk collecting centre (mobilising a field civil officer who is motivated by the need to help his own father). Securing the created market by educating needy fellow villagers on how to keep milk cattle |
| 254 | Fishing in the village lake | Using the social contacts to restrict the rights of fishing in the lake to a limited number of fish catchers. In this case 254 creates a sustainable income generating opportunity also by providing income earning opportunities (by selling fish) to mobilised needy fellow villagers |
| 271 | Re-commencement of paddy cultivation after bankruptcy (unusual land tenancy) | Mortgaging own paddy land to friend in the village (after the bankruptcy) and getting the control back on fixed yield basis and giving the part of the same land for another villager on 1/3rd basis. |
| 271 | Commencement of selling vegetables in village fairs and also the boutique business | Using a social contact to obtain transportation facilities free of charge |
| 271 | Commencement of the boutique business | Using a social contact to purchase goods on long term credit |
| 271 | Introducing the new products to the boutique (coconut based building materials) | Using a social contact to obtain these materials on interest free credit and obtain the transport facilities free of charge from another contact. |
| 60 | Keeping two homestead allotments within the family | Living together (without getting married) in order to adapt to the legal requirements so that they can retain both the land allotments. |
| 96, 112 | Obtaining the land in the village | Getting married (just before making the application to obtain land in the village) with the sole aim of being qualified to receive a piece of land in the village. Here case 112 has taken extra effort to negotiate with his former girl-friend to get married. |

If we take Case 82's starting a business of buying and selling paddy, it appears that she mobilises her brother's experience/knowledge of the buyer-market as well as his previously-established contacts with middlemen/traders. Subsequently she combines her knowledge (about the villagers) and social contacts within the village (which were established through societal involvement, money-lending and rice-processing business) to extract values. Similarly the success of her money-lending business is congruent with our central argument i.e. pursuing opportunities without regard to the resources under control. In this instance she mobilises her established contacts with banks to obtain low interest loans and lends money to a selected group (to avoid the risk of defaults) of needy villagers (with whom she has formed contacts) at very high variable interest rates. By doing so she invests her own money in her other two businesses, thus also avoiding resource conflicts. She exchanges creditworthy customers and her knowledge of creditworthiness of the fellow villagers with Case 60. The latter is of vital importance in overcoming the risk of defaults when lending to new customers. Similarly case 56's obtaining a rice mill can be taken as a good example of mobilising capital resources through social networks. This drastically reduced the capital requirement for starting this business by overcoming potential monetary outflow from the family unit in interest payments on a bank loan.

This is also an example of mobilising resources to extract values through social networks, by introducing an existing service (i.e. rice-milling) to the community with a better technology - thus confirming the arguments presented in Chapter Two that the entrepreneurial process represents identifying new opportunities, which introduce new techniques and/or products and services that are either new to the individual or

community (Bryant, 1989). This, in contrast to case 9, also eliminates the extra resource requirement of collateral for a bank loan, and thus further overcomes the constraint of limited resources. Although case 9 perceived a similar opportunity (but targeted at a different market segment) before case 56, he could not capitalise on it - as he did not have the required collateral or social contacts to use as a guarantor to obtain a bank loan - and thus delayed the further implementation of his business development idea by at least by another year.

The social network among cases 77, 165 and 250 is another example of mobilising resources through social networks in order to reduce (a)cost of production as well as (b)initial working capital requirements of paddy cultivation. This was done by exchanging labour and draught cattle among these three entrepreneurs. This is a lucid example of resource mobilisation among entrepreneurs, which helped them to pursue opportunities beyond the limits of the owned resources e.g. cultivating more than one hectare at a reduced cost. This process also helped them overcome shortages of labour during peak seasons, which in turn facilitated adapting to the various time constraints. If we take one of their other activities, e.g. subcontracting irrigation channel maintenance, this is also congruent with the central argument. In this case they utilise their contacts (established through their office-bearing career in the farmer organisation) with Mahaveli Officials to obtain sub-contracts in adjoining villages, and capitalise on the opportunity by co-ordinating needy inhabitants in respective villages (whilst helping them to overcome potential hostilities) with the agreement that they settle the wages upon receipt of the payments from MDA. This was possible as the opportunity cost of the physical labour of these needy farmers is very low

during the off-peak season (due to the fact that they do not engage in any productive work during the off peak season). Once again extracting values regardless of the resource under control, but also reducing the working-capital requirements. In this case the only resource was their contacts with officials and knowledge of adjoining villagers, some building construction skills and the reputation gained from giving leaderships to various societies in their own village (without this good reputation it would not have been possible for them to co-ordinate the physical labour of adjoining villagers without day-to-day payments).

Chapter Five delineated how the high cost of production was one of the major reasons for unprofitability of paddy cultivation (of which 60 percent is physical labour costs). Consequently, case 250's co-ordination of an exchange labour arrangement among the members of his field channel society is a lucid example of reducing the cost of production by mobilising resources (in this case labour and a draught animal) through social networks. This also helped both parties (the entrepreneur and the needy members) to adapt to the various time constraints. The usual function of the field canal society is to organise seasonal clearing of the field canal so that MDA can issue water without delays, which then enables the farmers to adopt timely cultivation (see Appendices A3.1.5.4-A3.1.6). But it was a common complaint of the progressive farmers in the village (as well as the field level extension officer) that the majority of the poorer farmers fail to fulfil this responsibility (i.e. clearing their respective shares of the field canal). This was partly due to them selling their physical labour during the initial phase of paddy cultivation (see section 5.3.2). This therefore drastically affects the performance of progressive farmers, as they are unable to obtain water for

their fields at the required time. In this context case 250's co-ordination of his fellow members to also perform other functions (in addition to clearing of the field) represents an extraction of values (in terms of reducing cost of production as well as through adapting to time constraints) whilst "redefining of existing values". This confirms the argument presented in Chapter Two (section 2.1) that the processes of entrepreneurial value-extraction redefine existing values as well.

Chapter Five showed how paddy prices drop drastically during the harvesting phase due both to the formation of market gluts as well middlemen exploitation. One way of overcoming this for the entrepreneurs in the village was to delay the selling of paddy (also see table 3.1), by storing and then selling when the price went up. Capitalising on this opportunity is dependent on the farmer possessing sufficient storage facilities. On the other hand the storing of paddy brings the risk of damage by pest attacks (e.g. rat infestation). The latter is more likely if the floor and the walls of the store-house are not cemented properly. Cases 77, 92 and 93 capitalise on this opportunity by yet again confirming the central argument (i.e. pursuing opportunities regardless of the resources under control). In this instance, cases 77 and 92 did not have enough storage facilities whereas case 93 had enough storage facilities but without a cemented floor (and hence liable to rat attacks). All these cases had their own established contacts with traders/middlemen. They sold their produce to these contacts, just after harvesting, with the agreement that they could claim payments later on (i.e. when the price is higher) at prevailing market prices. These farmers took a greater risk by adopting this strategy (that these middlemen could run away with their produce). In case 92, one type of risk (i.e. likely pest attacks) is replaced by another.

However, they minimise this risk by establishing trust (see section 2.4.3) over a long period of time. In this instance both the village entrepreneur and the outside trader/middleman fulfil the conditions of the central argument i.e. extraction of values without regard to the resource under control.

The central argument is applicable to discovering and creating “new opportunities” as well. Case 250’s discovery and creation of a new market opportunity for paddy (e.g. contract-growing of seed paddy for the Co-op) and also case 119’s creation of new market opportunity (for selling cows’ milk) were empirical examples of this. In the former instance, case 250 discovered the existence of this opportunity through a social contact (which represented a mobilising of knowledge or overcoming of knowledge barriers). He then pursued this opportunity by mobilising (a)his social contact with the manager in the village Co-op shop to implement the programme in the village and (b)a group of farmers (comprising of both his entrepreneurial friends and fellow needy farmers) to implement the programme at the field level. This, while eliminating (a)market uncertainty (b)middlemen exploitation and (c)working capital requirement to purchase seed paddy, agrochemical and fertilizer, assured them of the highest market price (RS 9/kg) for their produce (which was also well above the prevailing GPS of RS 7.42/kg). In the latter case (i.e. starting the milk collecting centre) case 119 turned the competition created by his followers into an opportunity by persuading the GN (the field level civil servant) to organise a milk collecting centre in the village. In this case GN was motivated by the need to help his father to find a decent day-to-day income source (this opportunity was indicated to GN by case 119). The outcome was an assured market for milk produced in the village. Unlike paddy cultivation, the

sustainability of this “market opportunity” was entirely dependent on the increased supply of produce within the village. Therefore case 119 (who was the role model for milk cattle keeping for villagers) was actively involved in advising fellow villagers how to develop their cattle-keeping activity. This is a lucid example of mobilisation of resources by an entrepreneur (even without established social contacts) to create a market opportunity and to secure it.

6.2.3 Entrepreneurial value extraction as an exchange of values

The above findings also add another dimension to rural entrepreneurial value extraction i.e. “extraction of values through exchange of values”. As demonstrated by the empirical evidence, the flow of values through the social network was not only from one party to another (i.e. from other parties to entrepreneur). It also occurred in the social networks between entrepreneur and needy villagers, as well as among aspiring entrepreneurs (both within and out side the village).

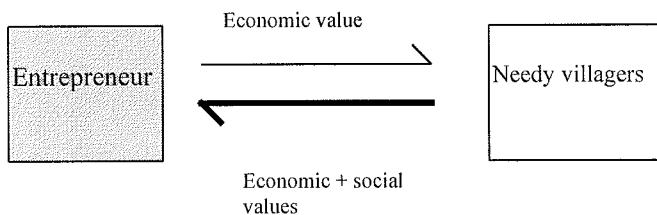
Take a new set of empirical evidence, for example cases 93 and 96 - who had their own buffaloes and engaged in large scale paddy cultivation. Having their own buffaloes contributed greatly to reducing the cost of production. This allowed them to adapt to the various time constraints (as they could avoid the higher demand for these services during the peak season). However, they were unable to spend their limited time and labour on looking after the buffaloes. Both these cases therefore used another needy person to look after their animals. In this relationship, these entrepreneurs benefited by (a)avoiding resource conflicts, i.e. time and labour with their other activities, and also (b)getting their lands ploughed free of charge. In return,

these two needy persons got an opportunity to supplement their livings by hiring out buffaloes. In this case, although the larger share of value was extracted by the entrepreneurs, the other party could not survive without these arrangements, thus establishing a symbiotic relationship. A similar kind of relationship was found between case 60 and a needy villager. In this case the needy villager looked after case 60's milking cow. The needy villager benefited by receiving every other calf and money from selling milk, whereas case 60 benefited by having the opportunity to increase their herd of draught animals. This again demonstrates the bi-directional flow of values, both from the entrepreneur to the needy villager and vice versa. This argument is further reinforced by analysing case 60's co-ordination of a group of non-farming families in contracting the paddy harvesting of fellow villagers. In this example case 60 benefits by (a)reducing the cost of her own paddy cultivation as well as by adapting to time constraints (b)avoiding resource conflicts (i.e. male partner's time and labour) with that of hiring out the tractor and (c)gaining an extra income. The needy villagers benefited by having the opportunity to earn a living. Again, although case 60 extracted the greater share of values, the other party could not pursue this opportunity without the involvement of case 60 as the co-ordinator of the activity. Case 254's restriction of the fishing rights (by forming a society) in the village lake also demonstrates the bi-directional flow of values through a symbiotic relationship (between entrepreneur and needy villagers). Here case 254 benefited by securing a sustainable extra income-generating opportunity where as the needy villagers benefited by having a secured opportunity to sell the fish caught by case 254 and other members of the society. Similarly case 250's exchange labour/draught cattle arrangement among the members of the field canal society, as well as their activities

in the “Samagi farming society”, also confirms the argument that entrepreneurs extract values by exchanging values.

Taking the exchange of values between entrepreneurs and fellow needy villagers, the entrepreneur augments the volume of extracted values by co-ordinating the needy villagers. This phenomenon closely relates with the Casson’s (1982) private co-ordination of misallocated resources leading to social co-ordination (see section 2.6). This co-ordination helps the entrepreneur to pursue opportunities which are not within the capabilities of his own resource limits. Needy villagers benefit by obtaining the entrepreneur’s managerial input for efficient allocation of their resources (e.g. time, land and labour). This is not possible without the involvement of the entrepreneur. As a result the entrepreneur not only extracts economic values but also social values, e.g. respect and higher social status (i.e. power) among the needy villagers (see figure 6.1).

Figure 6.1. Entrepreneurial extraction of values through exchange of values



This exchange of value between the entrepreneurs and the needy villager confirms the argument presented in section 1.2.2 that the entrepreneur is the change agent of the

society. The entrepreneur, while changing his economic and social status (i.e. private co-ordination), is also helping others to achieve changes in their economic status (i.e. social co-ordination), through both (a)the value-extraction process and (b)by giving leadership-authority to common societies in the village. Cases 250 and 56's reintroduction of co-operative labour (a disappearing trend with the introduction of open economic policies) provided empirical evidence of societal change through extraction of values and the group activities of the "Samagi Farming Society", which are an example of extraction of value by giving leadership to societies (see case 250). These aspects will be further dealt with in section 6.2.4.5.

Extraction of value through exchange of values, is not only applicable to the social network between the entrepreneur and the needy villagers, but also to networks among aspiring entrepreneurs. Sharing (a)the knowledge of creditworthiness of fellow villagers and (b)creditworthy customers is exemplified by cases 60 and 82. The relationship of trust between cases 77, 92 ,93 and their known traders (who buy paddy from them) is an example of bi-directional flow of values between entrepreneurs and outside traders. In this transaction, the trader benefited by having the opportunity to invest his money in other activities such as buying paddy from other farmers, whereas the entrepreneurs benefited by obtaining higher prices for their produce without having to invest or by deferring investment on constructing and/or improving storage facilities. Draught cattle and labour exchanges among cases 77,165 and 250 represents a multi-directional flow of values among the entrepreneurs within the village. All in all, the value-exchange process represents a synergetic effect in that this process can only take place with the presence of all the parties concerned i.e.

entrepreneurs both within and outside the village (with their need to extract and accumulate values) and needy villagers (with their need to survive). This symbiotic relationships brings in a new dimension to the entrepreneurial value- extraction in a limited resource context, that is extraction of values through co-operation in a context where competition is normally the rule of the game (i.e. open economic policies).

6.2.4 Entrepreneurial value extraction through pluriactivity

It was argued, in Chapter Three, that LRFs could benefit by diversifying into other areas in which they have more control over price. Subsequent arguments demonstrated that “pluriactivity” may be adopted by farmers as (a)a survival strategy and/or (b)a capital accumulation strategy in the context of diversification.

It was indicated in Chapter Five that the village represents a barren environment where concentration of a limited variety of income-generating opportunities is one of the main constraints for achieving economic growth. It was also revealed that the available income-generating opportunities are also village and paddy-dependent, and hence based on seasonal credit transactions with high risk of defaults. It was argued that the entrepreneurial value-extraction involves (a)discovering/creating opportunities and (b)overcoming the existing constraints (as opposed to working within the existing constraints). Consequently, empirical evidence confirmed these arguments, demonstrating that the pluriactivity of these farmers goes beyond the boundaries of survival management strategies and helped the farmers augment the total value extracted. This adds a novel dimension to the rural entrepreneurial literature.

Consequently, the entrepreneurial drive (for diversification - Casson, 1982:316) of farmers for extracting values through perceiving/discovering opportunities from various niches of the barren environment has led these farmers to pursue more than one income-generating opportunity, both simultaneously and at different points of time during a given season.

6.2.4.1 Pluriactivity: pursuing multiple opportunities without regard to the resources under control

Take case 271's achievement of economic success after the bankruptcy; he first mortgages his paddy land to a friend for RS 25,000 in order to overcome the constraint of working capital requirements (for paddy cultivation). Then he obtains the land back on "fixed yield basis" (see Appendix A4.3). This clearly demonstrated how this farmer lay the foundation for his economic success by extracting values via mobilising resources through social networks. Then he diversified into his next business activity i.e. selling vegetables in village fairs, again regardless of the resources under control i.e. obtaining free transport facilities from a known person. Then he diversified into a boutique business, again by mobilising resources through social contacts i.e. to obtain goods on long-term credit and to get free transportation. Then, by discovering a market gap, he introduced a new range of products (i.e. coconut-based building materials) into the village. In this instance, apart from the previous social contact (who provided transporting facilities), he again utilised another social contact to obtain these materials on credit. Because of increased time-pressure, he implemented the most unusual land tenancy in the village, giving part of

his (mortgaged but cultivated on a fixed-yield basis) land to a fellow villager on a 1/3rd basis. This, while providing enough paddy to (a)settle the rent, (b)use as inputs for small-scale paddy-processing business and (c)for home-consumption purposes, also eliminated potential resource (e.g. working capital, time and labour) conflicts. This therefore demonstrated the capitalisation of multiple opportunities without regard to the resource under control.

Multiple activities of case 92 (before the partial business failure) also demonstrates a similar phenomenon. His starting of a tea room, a workshop for repairing agricultural implements, a hairdressing saloon and bicycle-repair shop are examples of mobilising resources to pursue multiple opportunities.

The argument is also supported by case 82. Empirical evidence is provided by some of her activities i.e. money-lending, buying and selling paddy, selling fertilizer and agrochemical (refer to table 6.1). Likewise supportive empirical evidence can be drawn from other case studies. For examples, case 60 operates a multitude of activities simultaneously, i.e. paddy cultivation, hiring out the tractor, contracting of paddy cultivation and money lending (see above table 6.1). In this instance they avoided potential resource conflicts (e.g. for time and labour) between paddy harvesting and hiring out the tractor, by co-ordinating the contracting of paddy harvesting activity. This enabled the male partner to allocate his time and labour to hiring out the tractor while allowing the female partner to complete the harvesting activities in their own fields. This helped them to adapt to the time constraints (i.e. by avoiding the crop getting damaged by the onset of next rainy season) also helped to

gain an extra income by capitalising a time based opportunity without regard to the resource under control.

6.2.4.2 Pluriactivity as a strategy for minimising risk of defaults

The empirical findings revealed that some entrepreneurial farmers use the pluriactivity as a “credit recovering strategy” or as a “trapping mechanism” in minimising the risk of defaults. Case 92’s boutique business is one example of this. He sold goods on credit (before the partial business failure) and also bought and sold paddy. This helped him recovering the credit in the form of paddy from the boutique customers. A similar system was operated by case 56. Case 56 operated a paddy barter system where fellow villagers exchanged goods for their paddy. A part of the paddy obtained through the barter system was consumed (they do not consume the paddy from their own land due to the fact they are high value seed paddy varieties) and the other part was resold to boutique customers. This shows how two activities in the total business process complement each other in minimising the risk of defaults as well as reducing the monetary out flow from the family unit (in terms of curtailing the expenditure for consumption requirements).

Taking case 82’s lending money and buying and selling of paddy: she lent money to a group of needy farmers with the agreement that they sell their paddy back to her and again showing the complementary nature of two activities in minimising the risk of defaults. Another useful example is her starting the new business of selling agrochemical and fertilizer on credit with the intention of controlling the growth of her money-lending business and risk of defaults. This again demonstrates how one

component of pluriactivity is utilised to overcome an existing constraint. Similarly case 96 hired his tractor out - only to his own labourers - and thus recovered a greater share of credit.

6.2.4.3 Pluriactivity as a cost -reduction and time-saving strategy

The empirical evidence demonstrates how some entrepreneurial farmers adopted pluriactivity as a strategy to overcome high cost production and to save time. An useful example which supports this argument can be taken from the case 9. In this instance case 9 reduced the cost of paddy-cultivation by partly omitting the “winnowing of paddy” in the field. By doing so he used the soaking process of his rice-processing activity to separate empty grains from full grains. Consequently he reduced the cost of post-harvest preparation as well as saving the time from both post-harvest preparation and from cutting grass to feed cattle by using the separated empty grains as a cattle-feed. Time saved from these strategies was invested in his other activities, e.g. rice-processing, rice-milling, acting as a paddy-broker during the harvesting phase. Similarly case 60’s contracting out of paddy harvesting (to the group co-ordinated by her) also reduced (a)the cost of harvesting of their own paddy fields and (b)potential resource conflicts between paddy harvesting and hiring out the tractor.

Similarly cases 93 and 96 hired out draught animals not as an extra income-generating source but as a strategy to reduce potential monetary outflows and by avoiding potential conflicts for time and labour resources.

Pluriactivity increases the total workload (Herrmann and Uttitz, 1990) but in all these cases entrepreneurial manoeuvring of pluriactivity has been utilised in overcoming the potential time pressure. These also confirm one of the previous arguments, i.e. the entrepreneurial process redefines (see section 2.1) the existing values (see table 6.2).

Table 6.2: Pluriactivity as a mechanism for redefining existing values

| Existing value | redefined value |
|---|--|
| Pluriactivity increases the working capital requirement | Pluriactivity to decrease the working capital requirements |
| Pluriactivity increases time pressure | Pluriactivity to decrease time pressure |
| An extra activity to increase the income | An extra activity to decrease the potential monetary outflow |

This adoption of pluriactivity as a strategy of reducing the potential monetary outflow is clearly indicative of cultivation of OFC for home consumption by almost all the entrepreneurial farmers in the village (see Appendix A4.2).

6.2.4.4 Pluriactivity as a strategy for increasing the bargaining-power and attracting customers

This argument can be supported by taking an example from case 60. In this instance, case 60 cultivated a considerably larger extent of paddy land. At the same time she operated a business of buying and selling paddy from the villagers. By doing so, while extracting a share of potential monetary outflow from the village (see section 5.3.2), she also augmented the value extracted from her own paddy. She meanwhile achieved a slightly higher price (e.g. by overcoming the constraint of low paddy prices during the harvesting stage) because the larger pool of paddy gave her extra bargaining power with her known buyers. This really illustrates the previous assertion that entrepreneurial value-extraction is a process of exchanging values. In this

instance, case 60 helped the needy farmers to overcome potential cheating by middlemen (see section 5.2.3), whilst case 60 benefited by augmenting the extracted value. Traders benefited by having established contacts with case 60, overcoming the potential competition from other traders as well as saving their time. Time-saving is very important for traders, as they have to maximise their buying of paddy from farmers during the short period of the harvesting phase (this phenomenon is applicable to other traders who have established contacts with large-scale commercial farmers as well as paddy-buyers in the village). In this way pluriactivity serves as a customer-attraction strategy.

Furthermore, pluriactivity attracts customers at the village level. Case 92, for example, operated a multitude of businesses with the aim of providing an unusual combination of services to the villagers, i.e. the village boutique, a tea room, a workshop for repairing agricultural implements, a bicycle-repair shop, buying and selling of paddy, and a hairdressing saloon on his premises (effectively a one-stop shop).

6.2.4.5 Pluriactivity as a horizon-expansion strategy

It was indicated in Chapter Three that the motives for pluriactivity may be both economic and social. Consequently, it has been argued by De Vries (1993:200) that pluriactivity has been adopted by some highly-professional Western European farmers in order to expand their social horizons. This involves paid political and administrative functions in agricultural organisations such as co-operatives and extension services in local planning authorities. That, according to the same author, is

not motivated by the opportunity to earn extra income but by (a)the need for exercising influence and power in public arenas where decisions are taken about the conditions of farming in general, (b)gaining a satisfaction from being in touch with other people, and (c)the chance to get away from routine works on the farm (p 200).

A similar kind of phenomenon was observed in the study village too. The majority of entrepreneurs (for example cases 09, 56, 60, 77, 82, 92, 165, 250, 254) in the village were involved in unpaid self-motivated social functions (see, for example, case 250). Though every entrepreneur extracted social values (i.e. satisfaction and social status) by getting involved with these functions, it appeared that these functions go far beyond the boundaries of simple extraction of social values as they also involved changing local society at large. This confirmed the previous arguments (section 3.1.7.2.2) that the motive of pluriactivity may be socio-cultural (De Vires, 1993) and /or community driven (Fuller, 1990). This is done both through a process of value-exchange (see section 6.2.3) and by exercising power, so changing the social behaviour of the majority of economically-unsuccessful farming families. This is, as was revealed by the empirical evidence, to generate a conducive socio-economic environment in the village.

An example of this is the “Gomathi Kantha Samithiya” (i.e. Gomathi Women’s Society). This women’s society has been honoured by the presidential award (along with RS 50,000) for the best women’s society in the country. Cases 56, 60, 82, along with wives of some other entrepreneurs (i.e. case 68, 92 and GN’s wives), were the leaders who co-ordinated the activities of this society. One of the functions of this

society was to provide very low interest (2 percent per month) agricultural loans to the needy members. The eligibility of the members for obtaining these highly-competitive loans was decided by the co-ordinators according to a points scheme based on their punctuality and participation in common social functions (i.e. “*shramadhanal*”) organised by the society. The village entrepreneurship could therefore change one of the major weakness of unsuccessful families, i.e. “a lack of time orientation”. Case 250’s (along with cases 77 and 165) imposing of various sanctions (in the delivering of financial aid) for members of the “Samagi Maranadhara Samithiya” (a society for aiding funeral arrangements) is another example of continuous attempts made by village entrepreneurs to change two socially and economically undesirable behaviours of economically-unsuccessful farmers i.e. alcoholism and gambling. The rationale for these attempts is clearly demonstrated by the following quote.

“We need our children to reproduce their children in an environment free of drug addicts and thieves” case 165.

6.2.5 Summary

This part analysed various entrepreneurial strategies adopted by the farmers in order to create and extract values. The analysis demonstrated how village entrepreneurs pursue opportunities - (a) without regard to the resources under control, and (b) by overcoming existing constraints - which eventually resulted in pluriactivity (i.e. expanding the total volume of value extracted through pursuing multiple opportunities). Finally it was illustrated how pluriactivity itself has been adopted by

these farmers to overcome some of the exiting constraints in order to further expand the boundaries imposed by the existing constraints. It was finally demonstrated that pluriactivity operates as a social horizon-expanding strategy, which in turns helps entrepreneurial farmers to pursue opportunities without regard to the resources under control, so leading to the creation of extra values (i.e. an expansion of potential opportunities - see section 2.4.2).

6.3 Managerial value extraction

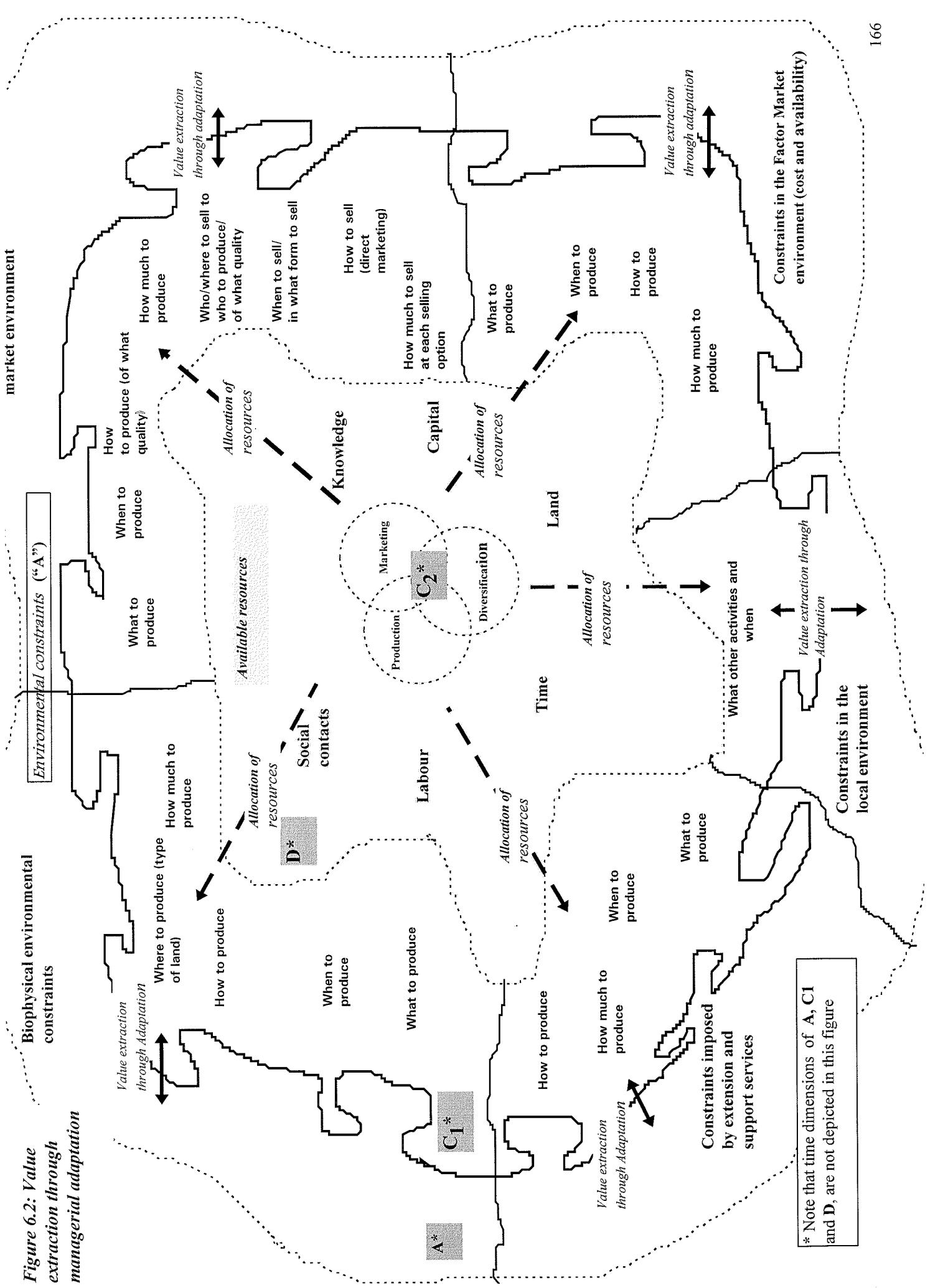
The previous part dealt with entrepreneurial value-extraction strategies adopted by economically-successful farmers through their capitalisation on opportunities and overcoming the boundaries of existing (a)resource limits and (b)environmental constraints. In contrast, the main aim of this part is to analyse the various managerial strategies adopted by economically-successful farmers working within the existing constraints. These analyses will be based on the phenomenon presented in figure 6.2.

6.3.1 Successful farmers as environment/market-oriented allocators (mixers or manipulators) of existing resources

Figure 6.2 depicts the managerial value-extraction strategies adopted by the successful farmers from the environment (A). This was achieved through various adaptive strategic actions (C_1) in terms of production, marketing and diversification activities (C_2), as well as by the efficient and effective allocation of available resources (D).

Figure 6.2: Value extraction through managerial adaptation

Biophysical environmental constraints



* Note that time dimensions of A, C1 and D, are not depicted in this figure

These strategic actions (in relation to farming activities) were of two main types (see Table 6.3) viz. strategic actions (a)which were taken well in advance and (b)which were taken/changed during the product lifespan.

Table 6.3: Two types of strategic actions based on the time horizon

| Strategic actions which were taken in advance (a) | Strategic actions which were taken/changed during the product lifespan (b) |
|--|---|
| what to produce | when to sell/in what form to sell |
| when to produce | who/where to sell to |
| how much to produce | how to sell |
| who to produce/of what quality | how much to sell at each selling option |
| where to produce (type of land) | |

Extraction of value was achieved through increasing the profits in terms of (a)increased income and/or (b)decreased cost of production (both direct costs as well as indirect costs such as costs incurred by crop failures). Some empirical evidence for such value-extraction is depicted in Table 6.4.

Table 6.4.: Some empirical evidence for extraction of values through managerial adaptation

| Environmental constraints (“A”) | Strategic actions (“CI”) | Examples for related strategic actions (i.e. empirical evidence) | Examples for extracted value |
|---|---|--|--|
| Constraints imposed by biophysical environmental conditions (section 5.2.1) | 1.What to produce* 2.when to produce* 3.how much to produce* 4.where to produce* 5.how to produce | 1. selection of specific crop varieties (e.g. case 60 and 96's cultivation of a mix of short-age and long-age varieties within the given time and labour constraints, case 56's cultivation of short-age seed paddy in order to efficiently and effectively allocate the time and labour among other activities). 2. timing of planting and harvesting activities so as to avoid crop damages by unfavourable weather conditions (i.e. adhering to crop cultivation calendar) 3. restriction of cultivated land extent subject to internal resource constraints (e.g. cases 33, 92, and 165's commencement of paddy cultivation in a small land extent) 4. selection of appropriate land type to cultivate various crop varieties depending on the season (e.g. case 96's cultivation of OFC in the home garden during the Maha season and Case 60's cultivation of Gherkin in the paddy land during the Yala season) 5. adoption of various production methods so as to complete the cultivation within imposed time constraints (e.g. staggered cultivation and seed broadcasting adopted by case 60) | 1 decreased cost through avoiding crop failure and increased income by increased cultivated extent (case 60) and other income-generating activities by avoiding resource conflicts (case 56). 2.decreased cost through avoiding crop failure 3. decreased cost through avoiding crop failure in terms of efficient and effective allocation of available time and labour within the imposed time constraints 4.decreased cost and increased income by avoiding crop failure 5.decreased cost through avoiding crop failure and increased income by increased cultivated extent by efficient and effective allocation of time and labour |
| Constraints imposed by factor market conditions i.e. labour and agrochemical (sections 5.2.1, 5.2.2, 5.3.2) | 1.What to produce* 2.when to produce* 3.how much to produce* 4.how to produce | 1. selection of specific crop varieties in order to allocate time and labour resources efficiently and effectively within the given time and labour constraints,(e.g. cultivation of a mix of short age and long age varieties by cases 60, 93, 96) 2. timing of cultivation in order to avoid peak demand for labour and farm power, e.g. case 33,77 and 96's commencement of paddy cultivation before the majority in the village. 3. restriction of the cultivated land extent in order to efficiently and effectively utilize available labour (e.g. case 96's reduction of cultivated mortgaged land extent). 4.(a) adoption of various production methods so as to effectively and efficiently utilize the available time and labour (e.g. case 60's staggered broadcasting -as opposed to transplanting- of a mix of short-age and long-age paddy varieties. (b) adoption of alternative technologies to reduces the cost of agrochemical (e.g. case 119's application of a mix of chemical fertilizer and cow dung, case 271's substitution of paddy straw to Potassium fertilizer, case 60's broadcasting of seed as a means of controlling weed). | 1.decreased cost through avoiding crop failure and increased income through increased cultivated extent within the given time and labour constraints 2.increased income though increased cultivated land extent by adapting seasonal fluctuation of the supply of labour 3.decreased cost through avoiding crop failures by adopting to the time constraints within the given limits of time and labour resources 4.(a) decreased cost through avoiding crop failures and increased income by increased cultivated land extent at a decreased cost (i.e. due to the higher usage of family labour) (b) increased profit though decreased input (agrochemical) cost |
| Constraints imposed by product market conditions | 1.What to produce* | 1. cultivation of high value varieties (immaterial of seasonal price fluctuations) e.g. case 60 and 165's cultivation of upmarket paddy varieties, case 56's cultivation of only short-age seed paddy (i.e. contract growing) within the given time and labour constraints. | 1.increased profit through increased income/given output |

| | | | |
|---|--|--|--|
| (sections 5.2.1, 5.2.3) | <p>2.when to produce*</p> <p>3. how much to produce*</p> <p>4.who to produce* to/of what quality</p> <p>5.who/where to sell to</p> <p>6.when to sell/in what form to sell</p> <p>7.how to sell</p> <p>8.how much to sell at each selling option</p> | <p>2.timing of cultivation so as to harvest the crop in a time window where prices are reasonably higher (case 60 and 77's early cultivation of paddy so as to sell them at a higher price, case 60's cultivation of upmarket paddy variety only in the Yala season to capture the time window created by Christmas and Muslim festivals, case 254's cultivation of gherkin in the off-peak season, case 56's timing of chilli and onion cultivation).</p> <p>3.taking a decision as to how much of each crop variety should be produced for various marketing alternatives within the given time and labour constraints (e.g. Case 250 cultivation of one hectare of seed paddy and one hectare of other paddy varieties, case 56's cultivation of only one hectare of seed paddy, Case 254's cultivation of gherkin in a part of the paddy field.</p> <p>4.forward contracting i.e. case 56, 77,95 and 250's contract growing of seed paddy, Cases 60 and 254's contract growing of gherkin.</p> <p>5.obtains a higher price by capturing geographical market windows (e.g. case 95's selling of onion to a trader in a distance town, Case 56's selling of rejected seed paddy to a known person in a distance town).</p> <p>6(a)fetches a higher price by capturing time-based market windows e.g. store and selling of paddy at a later date (e.g. cases 33, 77, 96 and 165's selling paddy,</p> <p>(b)Fetches a higher price by capturing time-based market window (may be geographical or not) by way of changing the form of the produce, e.g. case 56's selling of sun dried chilli and onion later date at a higher price,</p> <p>(c)Fetches a higher price by further processing, e.g. rice processing adopted by cases 9, 82, 250 etc., case 119's selling curd.</p> <p>7.fetches a higher by directly selling to end customers (i.e. direct marketing) e.g. case 56's selling of dried chilli to boutique customers, case 96's direct selling of vegetables, cases 82 and 9's direct selling of rice, case 288's direct selling of mushrooms.</p> <p>8.taking decisions to split the amount sold at each selling option depending on the available resources for reinvestments (e.g. case 165's splitting the selling of paddy among Co-op, PMB, a known rice mill owner and store and selling).</p> | <p>2.increased profit through increased income/given output</p> <p>3.increased profit through increased income/given output (i.e. attaining required quality parameters through avoiding resource conflicts between one or more activities)</p> <p>4.increased assured profit through increased income/given out put</p> <p>5.increased profit through increased income/given out put of high quality produce</p> <p>6.increased profit through increased income/given (value added)out put</p> |
| Constraints imposed by extension and support services (section 5.2.4) | <p>1.What to produce*</p> <p>2.when to produce*</p> <p>3.how much to produce*</p> <p>4.how to produce</p> | <p>1,2, 3 and 4. Avoid unprofitable situations by taking judgmental decisions (within the given physical and non-physical resource limits) in the context of advise/persuasions of extension and support services (e.g. case 96's reliance of own experience, small scale experimentation , observing others in cultivating new varieties and also in introducing new technologies as opposed to case 33's blindly following the advice given by an extension officer - this is the case with the majority of economically unsuccessful farmers).</p> | |

*these strategic actions are taken in advance and cannot be changed once taken during the product life span (i.e. in a single cropping season)



Staggered cultivation



Early harvesting

6.3.2 Integrated production and marketing strategies to maximise the extraction of values

The empirical evidence demonstrated that various combinations of strategic actions (which differ from one successful farmer to another) were adopted by farmers for maximising the extracted values. These combinations were also representative of their integrated production and marketing activities. These combinations were basically in terms of:

- (a)adopting a single strategic action for adapting to more than one constraint.
- (b)adopting more than one strategic action for adapting to a single environmental constraint, and
- (c)adopting (farmer specific) combinations of above (a) and (b) to maximise the value-extraction.

6.3.2.1 Adopting a single strategic action for adapting to more than one environmental constraint

Taking the strategic action “what to produce” adopted by case 60: selecting a mix of short-age and long-age varieties facilitates the cultivation of 3.4 hectare of paddy lands within the given time constraints (i.e. imposed by the biophysical environment). The same strategic action helped her decrease the cost of production by efficiently utilising family labour and time by means of staggered cultivation (i.e. how to produce). Adoption of staggered cultivation is not possible without selecting a mix of short-age and long-age varieties. Furthermore, case 60 also achieved a higher price for the share of her early harvested short-age paddy (by selling it earlier - i.e. she

knew when to sell). The cultivated upmarket variety “Samba” fetched a higher market price immaterial of the supply conditions. Thus she adapted to two major market constraints i.e. low paddy prices and seasonal price fluctuations. This case demonstrates how a single farmer utilises a single strategic action i.e. “what to produce” (also in combination with how to produce and when to sell) to extract values through adapting to three main environmental constraints.

Similarly case 77 adopted the strategy of early cultivation (i.e. when to produce) both in order to avoid peak demand for labour and to harvest the crop in a time-window where the price is relatively higher. This again demonstrates how the same strategic action is adopted by a single farmer for adapting to two types of environmental constraints (i.e. factor-market and product-market constraints). Likewise case 96 adopted the strategic action which addressed “how much to produce” both in order to adapt to the biophysical constraints as well as to factor market constraints by restricting the amount of cultivated mortgaged land, which on the one hand helped him to adopt to the time constraints (within the given labour constraints), and on the other hand efficiently utilising the available labour (both hired and family labour). Here the value is extracted through increased income in terms of increased cultivated land extent (only up to a manageable level) and decreased cost by (a)increasing the efficiency of labour usage and (b)avoiding crop failures.

This phenomenon of adopting a single strategic action for adapting to more than one environmental condition brings in two main issues viz.: (a)the integrated nature of the adopted strategic actions (in most cases an integration of production and marketing

activities) and (b)the increased efficiency of resource use. The latter is due to the fact that the adaptation to several environmental constraints is achieved by a single strategic action (i.e. a single resource allocation decision). In both the cases the final outcome is a maximisation of value extraction within the given constraints (both external and internal).

6.3.2.2 Adopting more than one strategic action to adapt to a single environmental constraint

In this instance, the farmer maximises the value extracted from a single segment of the surrounding environment, by adopting more than one strategic action, thus increasing the effectiveness of the outcome. This can again be illustrated by taking examples from case 60 (see Table 6.4).

The two main constraints imposed by the factor markets are (a)higher input prices leading to high cost of production (for both agrochemical and labour) and (b)the shortage of labour during the peak seasons. Case 60 adopts three strategic actions for adapting to these two constraints, viz.: (a)what to produce, (b)how much to produce, and (c)how to produce. In this example, case 60 cultivates 3.4 hectares of paddy land at a reduced cost. This is achieved firstly by selecting a mix of short-age and long-age varieties (i.e. what to produce), and secondly by adopting (a)staggered cultivation and (b)seed broadcasting (as opposed to transplanting). This is illustrated in the following extract.

“Method of paddy production:

Land preparation for paddy cultivation by this family (like few other minority families in the village) is started about two weeks before the majority of the farmers in the area. Cultivation is done in a staggered manner in which second and third land preparation activities (i.e. puddling and levelling) and planting of paddy is completed in blocks of one hectare or less. Usually a minimum of 5 days is kept between consecutive blocks (their records reveal that in the current season, the first block of land was cultivated on 12th November '94 which is three days before the official deadline for long age varieties, and the final block of land was cultivated on 10th December which is five days before the official deadline for short age varieties- see long age versus short age varieties bellow). Staggered cultivation is practised mainly in order to effectively use the family labour both at the land preparation and harvesting stages, in which they can finish activities in one land and move on to the next block and so on, without hiring labour. This, in fact, prevents an outflow of monetary resources from the family unit. At the same time, this is also a way of overcoming lack of hired labour during the peak demands periods.

When it comes to planting, the method "seed broadcasting" is practised as opposed to the transplanting of seedlings. It is a technically accepted fact that transplanting of paddy generates a relatively higher yield than that of in broadcasting. However, transplanting demands a higher number of labour days and thus has to incur a higher cost too. At the same time, as has already been discussed, obtaining hired labour during the peak demand periods is fraught with difficulties. According to the available information, it costs about RS 1700 for transplanting a hectare of paddy land which is equivalent to 17 hired labour days at the prevailing rates. Since they have chosen the method "broadcasting", they don't have to spend this amount as both the male partner and female partner are capable and willing to do this. Therefore in the above context "relatively low yield with low cost" has been chosen as opposed to "relatively high yield with a higher cost". Furthermore, according to them, broadcasting of seeds can be taken as an effective weed control method and thus reduces the cost of weed controlling as well. Savings from the above activities are contributed towards applying the recommended amounts of fertilizer which is of crucial importance in the case of cultivated High Yielding Varieties.

Long -age versus short-age varieties

....It is generally accepted among the villagers that long-aged varieties give a relatively higher yield. In this context, the first block of their land is cultivated with a long age variety at the very beginning of the season. Consequently, short aged varieties are cultivated in consecutive blocks of lands. This particular strategy is adopted in order to prevent crop losses towards the end of the season from rain fall and animal damages. On the other hand, some of the fields with short age varieties can be harvested a bit earlier than the peak harvesting time and thus can be sold at a relatively higher price too ...” (Case 60, Appendix 5).



Staggered cultivation of paddy with gherkin (case 254)



Hard working-harvesting of paddy (case 60).

6.3.2.3 Individual farmer-specific combinations of strategic actions

Two different economically-successful farmers may mix, manipulate and combine the various strategic actions (table 6.4) in two entirely different ways in order to efficiently and effectively allocate (or match) the available limited resources with opportunities also subjected to various environmental/market constraints. For example, farmers may adopt identical production strategies i.e. early planting of paddy (i.e. focusing on “when to produce”), but will do so in order to achieve three different aims i.e. (a)to avoid shortages of labour during the peak seasons (case 96), (b)to efficiently allocate the family labour by means of staggered cultivation (e.g. cases 33, 60), and (c)to harvest the crop in a time window when price is higher (e.g. cases 60, 77). Of these three, the first two are purely production strategies [i.e. (a)and (b)], whereas the third is a production-cum-marketing strategy (i.e. an integration of when to produce and when to sell) in which both the efficient allocation of family labour as well as early harvesting in order to obtain higher prices are achieved (e.g. cases 60, 77). Farmers who adopt this purely as a production strategy (e.g. cases 33, 96) may have other alternative strategies to sell his produce at a higher price (i.e. store and sell in cases 33 and 96).

Another farmer might adopt an entirely different strategy to overcome the shortages of labour during the peak season, by taking a sensible decision on the crop variety (i.e. “what to produce”). Case 56’s decision to cultivate only 3.5-month paddy varieties at a latter stage in the season can be taken as an example of this. In this instance case 56 addressed both the strategic dimensions of “what to produce” as well as “when to produce” but in a different context i.e. as case 56 had an assured higher market price

for her paddy (as a result of her entering into the seed paddy buy-back contract, “who to produce”), she was able to allocate the available time and labour at the beginning of the season for her other business activities, thus avoiding resource conflicts (i.e. management of pluriactivity - section 6.3.2.4). This was possible as she could delay the commencement of paddy cultivation as she cultivated only 3.5- month varieties. Furthermore, some other farmers may adopt an entirely novel strategy in order to adapt to (a)the shortage of labour during the peak season, (b)the low market prices during the harvesting stage and (c)the high cost of production, by combining three strategic actions, viz. “what to produce, when to produce and “how to produce”.

Case 60’s combination of short and long-age varieties, coupled with staggered cultivation along with seed broadcasting (in order to efficiently allocate family labour within the given time constraints also with the aim of reducing cost of production) provides another example. This is also a good example of effective allocation of own knowledge about crop husbandry. In contrast to these strategies, case 96 adopted the same strategy (i.e. cultivating short-age and long-age varieties in a staggered manner) but mainly to allocate available hired labour within the given time-constraints (his wife was the only available source of family labour). This clearly demonstrates the different applications of a similar strategic action by two different farmers subject to their resource limitations. In addition, by cultivating both short and long-age varieties, cases 60 and 96 have also been able to take another common market advantage i.e. offering two seed paddy varieties to fellow villagers, which helped them to maintain their existing customers as well as attract new customers.

A farmer may combine the strategic actions of “how much to produce, when to produce, and how to produce” in order to both allocate available labour within the given time constraints and to reduce the cost of production. An example of this is case 250’s staggered cultivation of paddy coupled with both family and exchanged labour allocations in order to cultivate two hectares of land (of which one hectare is allocated for a seed paddy buy-back contract with the Co-op at an assured higher market price), at minimum cost. Some other farmers may overcome the labour constraints by reducing the area cultivated to a manageable level (i.e. “how much to produce”) so as to allocate the available family labour efficiently within the imposed time constraints. The decisions by cases 33, 92, 96, and 165 to commence their paddy cultivation activities (in the first season after settling down in the village) in a land area smaller than one hectare (as cultivating one hectare was not a feasible option for them) can be taken as examples of this.

Some farmers may decide to store and sell paddy later at a higher price (“when to sell” - cases 33 and 254 for example), but another farmer who does not have storage facilities may adopt a completely novel strategy in order to obtain a higher price e.g. selling the produce to somebody he/she knows and receiving payments at a later date at the prevailing higher market price (i.e. “who to sell to and when to receive money”) (case 93 for example).

Other farmers might adopt a combination of both strategies (i.e. “when to sell” as well as “who to sell to and when to receive payments” - case 77), depending on each farmer’s available storage facilities. The same constraint (i.e. the low product price

during the harvesting stage) may be overcome (e.g. case 60) by combining “who to sell to” (i.e. capitalising geographical market windows) with “when to sell”(store and sell later to a known person). At the same time, an individual farmer may adopt both the strategies of “when to sell” as well as “who to sell and when to receive payments” in two different environmental circumstances. Case 92’s decision to change his strategy from “when to sell” to “who to sell and when to receive money” is an example for this. In this instance, although case 92 had enough storage facilities to store and sell paddy at a later stage, he did not adopt this because of the risk of damage by the recent outbreak of rat infestations (this damage was possible as the floor of his storehouse is not cemented). In this case, rather than investing on cementing the floor of his storehouse, he took a decision to use one of his contacts to get the same price advantage, which allowed him to (a)reinvest the profits from paddy on further production activities and (b)defer the decision of cementing the floor until he had saved enough money. All these cases also involved utilising social contacts.

Moreover, a farmer may adopt different strategies to allocate available resources even within a single strategic action. Examples are cases 56 and 82’s labour allocation strategies (i.e. strategic dimension of “how to produce”). Both of these cases employ only family labour for applying fertilizer and agrochemical. This prevents the pilfering of these inputs by hired labour. Case 82 employs contract labourers for all the other paddy cultivation activities. Case 56 employed contract labourers for all the other activities except for harvesting of paddy. Both cases adopted the strategy of employing contract labour in order to save time, which was then used for their other activities (i.e. the strategic action “how to produce” is integrated with the strategic

action of “what other diversified activities” or management of pluriactivity in section 6.3.2.4). This was possible as the contract labourers did not require supervision (though the direct cost of contract labour is relatively higher than that of hired labour, the opportunity cost of time is lower). Contract labourers are target-orientated and try to complete activities on one land as quickly as possible and move to next land whereas hired labours have a tendency to drag their feet in the absence of supervision. Case 56 did not employ contract labour for harvesting paddy because she would be unable to fulfil the required quality parameters for the seed paddy produced (as contract labourers are target-orientated they do not give any attention to maintain the quality of the produce while harvesting) on the buy-back agreement (i.e. integration of the strategic dimension “how to produce” with another strategic dimension “of what quality”). Although the quality of the final produce is also an important aspect for case 82 (for her rice processing activity), it is not as critical as in case 56, as she does not target a niche market based on quality. Therefore case 82 employed contract labour throughout (except for the application of agrochemical and fertilizer) paddy-cultivation activities so that she could efficiently and effectively allocate her time and labour (as she was the only available family labour) for her diversified income-generating activities.

Likewise, the findings of the study reveal that there is an enormous variety of :

(a)different applications of the same strategic action as well as (b)combinations of different strategic actions (representing production-marketing and diversification activities) adopted by different successful farmers. The nature of these various combinations and the rationale behind them (i.e. application) are decided entirely by

the individual farmer, being driven by his need for adaptation to (or need to keep aligned with) the various segments of the surrounding environment through pursuing potential opportunities as well as adhering to the constraints, subject to their resource limitations (see Figure 6.2).

6.3.2.4 Value extraction through diversification: management of pluriactivity

It was demonstrated in section 6.2.4, we see how important pluriactivity is for economically-successful farmers in terms of extracting values through (a)pursuing multiple opportunities and (b)overcoming some of the major existing constraints to the growth of businesses.

Empirical evidence revealed that managing pluriactivity is one of the most critical aspects in achieving/maintaining economic success. This was found to be necessitated by the requirement of the farmers to allocate their available limited resources (mainly time and labour) effectively and efficiently among multiple income-generating activities so as to avoid resource conflicts.

The empirical evidence supported argument (presented in section 3.1.7.2.3) is that “small scale LRFs could benefit from having complementary and supplementary diversified income generating activities”. The pluriactivity of farmers was found to be centred around their main core income-generating activity of paddy-cultivation. This was due to two main reasons

(a)most of the other income-generating opportunities in the village were created as a result of routine socio-economic activities based on paddy-cultivation (see section 5.3.2) and hence are time-based (see table 6.5).

Table 6.5 Time-based distribution of income- generating opportunities in the village

| Type of Activity | Phase** I | Phase II | Phase III | Demonstration cases (Appendix 5) |
|---|-----------|----------|-----------|----------------------------------|
| Paddy cultivation | H | L | H | all the others except case 138 |
| Keeping village boutiques | H | H | H | 56, 92, 138, 271 |
| Rice processing | H | H | H | 9, 77, 82, 95, 165, 250 |
| Buying and re-selling paddy | L | L | H | 9, 60, 82, 92 |
| Paddy brokers | L | L | H | 9 |
| Rice milling | H | H | H | 9, 56, 92, |
| Hiring out bullock carts | L | H | H | 60, 119 |
| Hiring out tractors | H | L | H | 60, 92, 95, 96, |
| Hiring out draught animals | H | - | H | 93, 96, 119 |
| Selling agrochemical | H | H | - | 82 |
| Contracting paddy harvesting | - | - | H | 60 |
| Money-lending | H | L | H | 60, 82, 96 |
| Fishing | H | H | H | 254 |
| Animal husbandry (a) keeping dairy cattle (b) goat keeping | H | H | H | 60, 95, 119, 250 119, 275 |
| Carpentry | L | L | H | |
| Ready made garments/tailoring | L | L | H | 82, 288 |
| Short-eats and confectionery | H | H | H | 56, 288 |
| Making and selling spice packets | H | H | H | 288 |
| Contracting irrigation channel maintenance | - | H | - | 77, 165, 250 |
| Make shift tea-rooms | H | H | H | 56 |

H= high intensity, L = low intensity, ** refer to chapter five for different phases of the paddy cultivation

(b)sustainable capitalisation of such “time-based opportunities” was dependant on how well the farmer could avoid (or manage) resource conflicts between paddy-cultivation activities (i.e. the main livelihood) and his other diversified activities.

It was evident from the empirical findings that farmers who were not able to manage their entrepreneurial drive (i.e. to pursue multiple opportunities) have also become economically unsuccessful.

In other words, deciding on which opportunities to pursue and which not to was found to be a crucial management decision. Case 92's partial failure of his diversified business is a useful example for this (i.e. his failure to efficiently and effectively allocate time and labour between paddy cultivation and other activities). Consequently case 82's deferment of installing a rice mill is an example of good management of entrepreneurial drive.

How efficiently and effectively a farmer can manage his resources among his diversified activities (including social activities) is illustrated by comparing the facts presented in Table 6.5 with those in Figure 6.3.

Figure 6.3: Example of labour and time allocation among pluriactive businesses by an economically-successful farmer (case 9)

| | Phase I (peak season) | Phase II (off-peak season) | Phase III (peak season) | |
|-------|---|--|--|--|
| day | *paddy cultivation activities by husband and wife throughout the day *selling of rice by children after school | *rice processing (also a part of post harvest preparation activity) *rice-milling *selling rice | *paddy harvesting activities by husband, wife and hired labour throughout the day *selling of paddy by children after school | *rice processing(also a part of post harvest preparation activity) *rice-milling *selling rice *buying and selling paddy *acting as a paddy broker |
| night | *rice processing (also a part of post harvest preparation activity) *rice-milling | *teaching traditional dances to children of fellow villagers free of charge (a social activity) by husband and wife *also certain rice processing activities (also a part of post harvest preparation activity) | *teaching traditional dances to children of fellow villagers free of charge (a social activity) by husband and wife *also certain rice processing activities (also a part of post harvest preparation activity) | |

*having only husband and wife as the main source of family labour

Some of the other examples of efficient and effective allocation of resources among various (complementary and supplementary) diversification activities can be taken from cases 56, 77, 82 and 254.

Case 254 cultivated OFC varieties (i.e. gherkin, chilli and onion) but only during the off-peak seasons (i.e. phase II). Thus he avoided resource conflicts (i.e. time and labour) between OFC and paddy cultivation activities. Furthermore, he cultivated OFC in part of his paddy land (i.e. “where to produce”), in order to look after (or adopt crop-management practices) both paddy and OFC cultivation activities simultaneously. His other main income-generating activity was fishing, but only during nights of the off-peak season. Thus he avoided resource conflicts among his three main income-generating activities viz. paddy, OFC and fishing.

Case 77, during the off-peak season, took contracts to repair and maintain irrigation channels in adjoining villages. He also cultivated 3 hectares of paddy land of which 0.2 hectare has been given (free of charge) to two migrant labourers. Thus he avoids the potential time and labour conflicts between this activity and his large-scale paddy cultivation by having two motivated employees to look after the crop management activities during the off-peak seasons at no extra cost.

In contrast, cases 253 and 275 are examples of inefficient and ineffective resource allocations among diversified activities. Case 253 operated a multitude of income generating activities i.e. building construction (on contract basis), hiring out vehicles (tractors and a mini coach) and paddy cultivation. These activities were not related (or complementary) to each other. All these activities were carried out entirely by hired labourers (with fully delegated responsibilities), which in turn demanded much time be spent on supervising them. These activities were also not supplementary to

each other. Resulting resource conflicts (i.e. time for supervising labourers) were aggravated as the activities were not restricted to a single location (i.e. to the village). The final result was pilfering by the unsupervised employees, further contributing to his economic failure. Likewise case 275's business failure was caused partly by resource conflicts between diversified income generating activities i.e. simultaneous hiring out of the tractor and the large-scale paddy cultivation (i.e. five hectares) by unsupervised labour.

6.3.3 Summary

This part presented the adaptive managerial strategies adopted by economically successful farmers. These are in order to maximise the extracted values by operating within the existing constraints. Maximisation of value-extraction was observable in terms of various “farmer-specific” combinations of integrated production, marketing and diversification activities. These strategies were also efficient and effective allocations of available resources (both within single activities and among various activities). The next part focuses on the interdependent and complementary nature of both entrepreneurial and managerial value-extraction processes in determining the economic success of farmers.

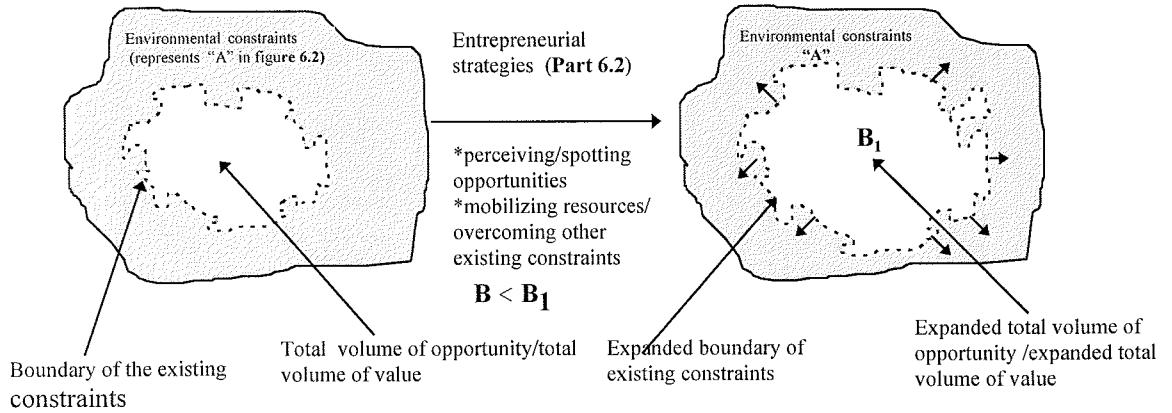
6.4.1 Entrepreneurial matching process and economic success

Part 6.1 argued that there are two main routes of value-extraction, entrepreneurial and managerial. Part 6.2, analysing various adaptive entrepreneurial strategies, demonstrated that entrepreneurial value-extraction cuts across the boundaries of existing constraints (both internal and external) and mobilises resources (both physical and otherwise) through social networks. This also involves exchanging values both among the aspiring entrepreneurs and between the entrepreneurs and non-entrepreneurs.

Subsequent analysis illustrates that the entrepreneurial drive of the economically-successful farmers for extracting values from various niches of the surrounding barren environment has led them to be “pluriactive”. It was demonstrated, in the above setting, that pluriactivity also provides farmers with a means of overcoming some of the major existing constraints. Overall the analysis presented in part 6.2 illustrated how the successful farmers are capable of expanding the boundaries (leading to augmentation of values) imposed by various constraints. This phenomenon is schematically presented in the Figure 6.4.

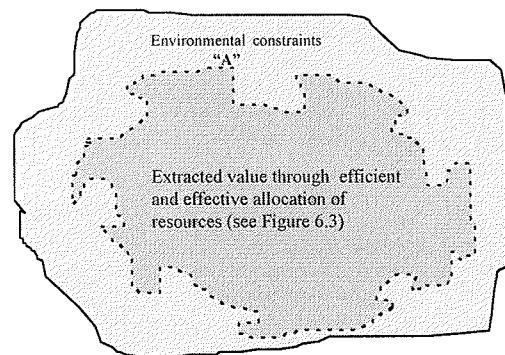
Part 6.3 analysed managerial value-extraction strategies. This demonstrated how economically-successful farmers maximise the extraction of values through operating within the existing constraints (including limits expanded by the entrepreneurial strategies), and through efficient and effective allocation of the available resources (both within single activities and also among activities).

Figure 6.4: The task of entrepreneurial value extraction strategies (augmentation of values)



These resource allocation decisions were firmly embedded in their market orientation (as opposed to production orientation) in terms of “farmer specific combinations”, of integrated production, and marketing and diversification activities. The outcome is schematically presented in Figure 6.5.

Figure 6.5 The task of the managerial value extraction



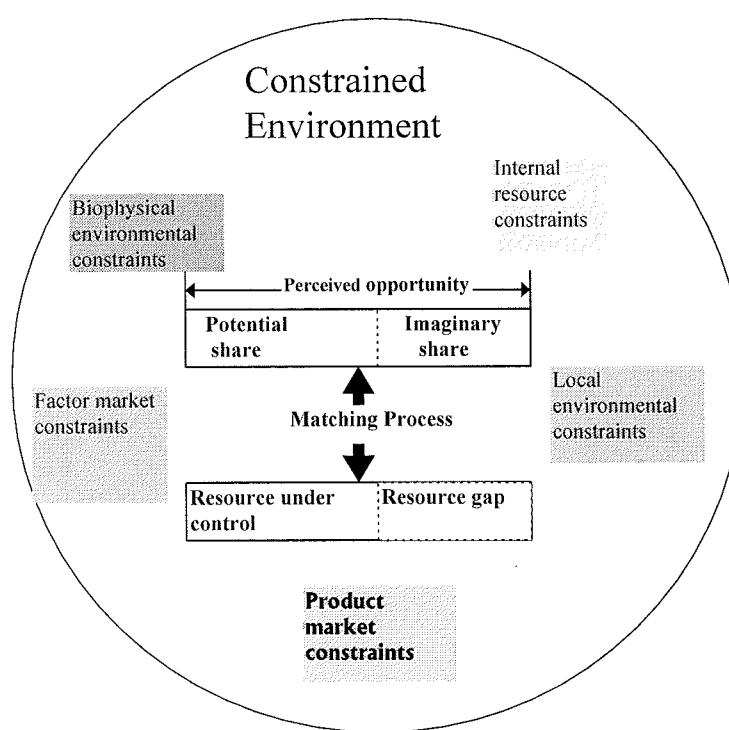
Adopting the arguments presented in section 2.1, where that accumulation of value is shown to be a result of entrepreneurial processes, the above findings fulfil the

conditions set out for the “entrepreneurial matching process” (section 2.4.2). This can be schematically presented as follows (see Figure 6.6).

6.4.2 Extraction of values: matching process in context

As argued in section 2.4.2, this consisted of a process of perceiving (or spotting) opportunities and matching them with resources - leading to the emergence of added values. One of the main entrepreneurial functions, in this process, was found to be spotting opportunities (both potential and otherwise - see Figure 2.2), unconstrained by the concerns about the resources under control in order to achieve economic growth.

Figure 6.6:matching process in context



Cultivating more than one hectare of paddy land (other than the examples given in Table 6.1) is a clear example of the ability and willingness (refer to section 2.5) of these farmers to imagine and perceive such opportunities.

Conversely pluriactivity represented their entrepreneurial drive to spot/discover opportunities in various niches of the surrounding low-opportunity environment. The other major entrepreneurial role played by pluriactivity was overcoming some of the other existing constraints (refer to part 6.3). The farmers' tendency to perceive opportunities which were beyond the capabilities of the resources under their current control brought in the need for another main entrepreneurial function i.e. mobilising resources (physical or otherwise) through social networks. Thus, the entrepreneur was not only involved in a process of imagining of opportunities (without regard to the resource under control) but also in a simultaneous process of determining resource-mobilisation possibilities. Following the argument that opportunity is a perceived bundle of unrealised values, these activities may be described as (as was argued in section 2.4.2) a process of creating values.

The final outcome of these entrepreneurial functions (as was argued in part 6.1) was the expansion of the boundaries of existing management demands, requiring complex management functions (see cases 92, 253 and 275). The main managerial function was to maximise extraction of values per given unit of resources (owned or mobilised). This was (as was argued before) achieved by adopting market-oriented farming and diversification strategies, implementing an efficient and effective allocation of resources. “Market-oriented efficient and effective allocation of

resources” was found to be a vital management function in the given limited-resource context. Deciding the structure of the pluriactivity in terms of choosing the right combination of multiple activities(Krasovec, 1983) - so as to avoid resource conflicts - was also found to be an essential managerial function. Without these managerial functions and skills (as the managerial function represented a mechanism of realising the perceived values), the outcome of the entrepreneurial initiatives was likely to be fruitless.

Most of the unsuccessful commercial farmers were found to be lacking these essential managerial skills. The eventual result of this was usually a misallocation of resources. An example which clearly demonstrated this phenomenon was case 3 (a non-respondent). He was the only farmer in the village who cultivated 10 hectares of paddy lands. These lands were situated not only within the village but also in some other administrative blocks of System B and in the (adjoining) System C. His cultivation of paddy outside the village was a clear deviation from that of the economically-successful farmers who restricted their cultivation activities only to the lands situated within the village (except case 119, who belonged to a non-farming family). In fact the extra lands cultivated by economically successful farmers were (most of the time) situated close to one another. This was the result of the sensible decisions taken by them to manage their available time efficiently and effectively within the given constraints (which represented another strategic dimension of “where to produce”). Why case 3 became a non-respondent was not because of his unwillingness to participate in the research but because of his inability meet the repeatedly made appointments for interviews. Whilst demonstrating his lack of time

orientation, this also indicated his endless running from one land to another throughout the season. The final outcome was a major crop failure, mainly as a result of his inability to adhere to the various time constraints. This farmer had the ability and the willingness to perceive opportunities which were beyond the limits of his owned resource limits. For example, the major share of his lands (i.e. 8 hectares) were on “fixed yield” basis. This is the most advantageous land tenancy for a farmer (see Appendix A4.3). He purchased the required agrochemical and fertilizer on interest-free credit (from a known trader). He used a two-wheel tractor (which had been borrowed from a known outsider on a nominal rent) for land preparation and transportation (from one land to another) purposes. All this demonstrated his ability to imagine and his willingness to pursue opportunities regardless of the resources under control as well as his capabilities of mobilising extra resources through social networks. However, his lack of managerial skills eventually led him to a disastrous situation. This clearly demonstrates that the entrepreneurial function, though a necessary condition, is not sufficient to achieve economic success. The essential nature of managerial function in terms of determining a sustainable structure of pluriactivity can be further understood from cases 92, 253 and 275 (also refer back to section 6.3.2.4).

In contrast, case 33 is a good example which illustrates economic failure due to lack of entrepreneurial skills. This farmer concentrated more on efficient and effective allocation of resources within paddy cultivation. His management orientation is clearly indicative from his commencement of paddy cultivation over a smaller land area (in order to efficiently and effectively allocate the family labour) leading to a

gradual build-up of savings and the cultivated paddy land area. This farmer adopted early cultivation not to obtain a higher price by selling paddy earlier but to allocate available labour within the imposed constraints. Unlike the majority of the other successful farmers, this farmer (like case 3) was monoactive. Therefore, he was very vulnerable to unfavourable developments in the farming sector. This confirms the argument presented in section 3.7.2.2. that pluriactivity reduces the risk of specialisation.

His gradual build-up of savings demonstrated that a farmer can accumulate wealth by concentrating on managerial functions (including strict control of consumption). However, his subsequent failure demonstrated that the managerial function is a necessary but insufficient condition to achieve a sustainable economic growth. If he had shared the knowledge of other progressive OFC farmers in the village (e.g. cases 83 and 165), he might not have ended up in failure and debt. His lack of entrepreneurial orientation is further evident from his deciding to hand over one of his mortgaged lands to its original owner free of charge. How two entrepreneurial farmers have adopted creative entrepreneurial strategies in similar situations is illustrated in cases 96 and 271.

Therefore, after taking into account the value extraction processes of economically successful farmers, it may be concluded that both entrepreneurial and managerial functions are complementary (see Gasse, 1985) and interdependent components of the entrepreneurial matching process. Both these functions are necessary for achieving a sustainable economic growth, but neither of them are sufficient alone. In this context,

it can be argued that the managerial function is an integral component of the entrepreneurial matching process. This confirms Kirzner's (1984) argument that short-term resource-allocation is simply a special case of entrepreneurial process (see section 2.5). However, this also highlights the need for integrating (a)the functions of Stevenson's (1997) "promoter" and the "trustee" and/or (b)Oslon's (1987) "start-up phase creator" and "growth phase manager" (refer to section 2.5) in order to achieve economic success in the given constrained environment. How successful farmers are at combining various managerial and entrepreneurial functions in the entrepreneurial matching-process can only be understood by applying the analysis presented so far to the individual cases discussed in Appendix 5.

6.4.3 A concluding note: farm success vs. economic success of the farmers and their relevant personal attributes

The economically-successful farmers in the study location adopt crop-management practices that are cost-effective as well as appropriate to their resource limitations. These practices may not be tried and tested, conventional husbandry practice. Seed broadcasting vs. transplanting of seedlings and early cultivation (i.e. staggered cultivation) of paddy rather than cultivating the crop together (i.e. for the purpose of integrated pest management) are examples of this. They may cultivate both short-age varieties as well as long-age varieties (despite the government's recommendation to cultivate long-age varieties - refer to section 5.2.4). These successful farmers do not adopt entirely modern technologies but utilise a combination of both modern and traditional technologies according to their resource limitations and environmental constraints. For example, these farmers use a combination of both buffaloes and

tractors for land-preparation activities depending on the circumstances. In summary, the findings of the study clearly reveal that adopting only conventional best crop husbandry practices alone (i.e. production orientation) is insufficient in itself to achieve economic success in the given context.

Similarly the findings of this study demonstrate that it was not the type of activity which made a family economically successful (for example cultivation of OFC rather than paddy) but the “farmer-specific” combinations of various activities.

Though this study focused only on the managerial and entrepreneurial process, it was also clear that the personal attributes of the economically-successful farmers distinguished them from those who were economically-unsuccessful i.e. certain values and attitudes counted for much.

Of these attributes “value placed on time” (Jacobsen, 1990; James, 1990; Wilkening, 1954) was found to be one of the most important attributes associated with the successful group of the farmers. Associated with this, the other significant values possessed by successful farmers were the “value placed on hard working” (Wilkening, 1954) and socially acceptable behaviour (i.e. non-alcoholic, abstinence from gambling). They were also found to be strict controllers of their expenditure on “home consumption” (delayed consumption/thrift - Wilkening, 1954). In fact, given the limited resource context in which they operated, strict control of home consumption (or deferred gratification) was found to be one of the most important requirements in terms of reinvestment of their savings. This also reflected a

prerequisite ability to make decisions on allocation of resources between consumption and re-investments. They also placed a higher value on family participation in the business activities as well as on delegation of responsibilities (in terms of division of labour) amongst family members.

All these successful farmers prepared to take the responsibilities for their own actions. Consequently, they did not blindly follow the (production oriented) advices given by extension and support services (see Norman, 1990). These approaches greatly differed from those of the economically-unsuccessful farmers who blindly followed their advices and always put the blame for crop failure on the rainfall (see Bowman, 1976 for similar findings). They also complained that there was nobody there to help them. This represented their simplified interpretation of the social networks possessed by entrepreneurial farmers.

¹In such events villagers work, without a monetary wage, together to achieve a common social objective.

CHAPTER SEVEN

Conclusions

7. Overview

This study was concerned with “Why do certain small-scale rural farmers become economically more successful?”. The thesis was focused on the rural agricultural sector in Sri Lanka where a minority of economically-successful farmers control the bulk of the means of production and exchange. Questioning the validity of the label “entrepreneurial farmers”, applied without appropriate grass-root level studies to the wealthy group of farmers, the main research issue - i.e. “What is the role of entrepreneurship in the economic success of rural farmers in Sri Lanka” - was raised.

It was next argued that the entrepreneur and his success should be studied in a more meaningful manner by looking at the entrepreneurial activity/process, so that the entrepreneur can be differentiated by looking at what he/she does and the outcome of his/her actions, i.e. those dedicated to the creation and accumulation of wealth. In the light of these arguments, the main research question was redefined as “what is the role of entrepreneurial activity/process in the economic success of rural farmers in Sri Lanka?”. The methodological aim was therefore to identify the winners (i.e. wealthier farmers) and to compare and contrast their economic activities/processes with those of poorer farmers in order to investigate the influence of economic behaviour on economic success. This assumed that (a)every farmer had equal access to the new economic opportunities created by the post-1977 market reforms and (b)the higher the impact and the frequency/intensity of entrepreneurial activity/process associated with

individual farmers (or a business entities) the greater the applicability of the construct of entrepreneur to them (or the business entity).

The practical difficulties of applying this approach to the Sri Lankan rural context, i.e. in identifying winners, were subsequently put forward. This was due to a large number of extraneous socio-economic variables (other than the entrepreneurial function) that influence the economic success of rural farmers. In order to control these variables a specific village in the System B of the Accelerated Mahaveli Development project, where farmers started with similar socio-economic status in 1984, was selected. The unique quasi-experimental nature of the study-site greatly strengthened the quality of the research. It facilitated the identification of an historic sequence of changes over time and the entrepreneurial processes behind such changes. This facilitated the formulation of specific research questions (based on the reviewed literature pertaining to entrepreneurship, agribusiness/farm management and related fields), and therefore addressed the research objectives of the study. These were to come to an understanding of:

- (a) the entrepreneurial activities/ processes adopted by inhabitants in the location and their contributions to economic success
- (b) the managerial activities/ processes adopted by inhabitants in the location and their contributions to economic success
- (c) the positions of entrepreneurial and managerial functions in the total business process and their relationships to each other in determining the economic success of farmers

These objectives were met through adopting a multiple embedded case-study strategy. This strategy was useful in differentiating the non-routine (Chapter Six) value extraction activities/processes of the economically-successful farmers from routine activities/process (Chapter Five) of the unsuccessful farmers. This also confirmed that the entrepreneurial process cannot be taken in isolation from its context (Beckford, 1993; Chell *et al*, 1991; Scott and Anderson, 1994; Morris *et al*, 1994).

7.1 Contribution of the thesis

Having summarised the research questions, study setting, and specific research objectives, the following section now discusses the main findings of the thesis and relates them to existing literature. This discussion will be based on the theme “entrepreneurial diversity in an apparently uniform context” in that the major finding on entrepreneurial processes of value extraction (which in turns provide the answer to the broader question i.e. “what is the role of entrepreneurial processes in the economic success of rural farmers?”) will be highlighted in the apparently uniform context formed partly by the routine socio-economic activities of the economically-unsuccessful farmers.

7.1.1 An apparently uniform context: routine socio-economic activities of the economically unsuccessful farmers

Biophysical and related environmental constraints (centered around rainfall distribution) restricted the farmers’ choices of action (Westgren *et al*, 1988), and forced the economically-unsuccessful farmers to engage in a cycle of routine socio-economic activities (centered around seasonal paddy-cultivation activities - Figure

5.7). This routinely ‘vicious cycle’ is production-oriented (Brunaker, 1990; Dagher and Christy, 1991; Ferris, 1988) farming (see Table 5.3) and culminates in consumption (i.e. including the seasonal lavish consumption behaviour) activities.

The eventual result of this cycle is crop failure followed by economic failure (i.e. failure to create and accumulate wealth). This was also found to be aggravated by a high risk of specialization as a result of their monoactive nature (Hetland, 1986; Hermann and Uittiz, 1990). The eventual result is a misallocation of resources (Casson, 1982) brought about by inefficient and ineffective production and lavish consumption activities.

The existence non-entrepreneurs, and their misallocation of resources in terms of production and consumption activities, provides opportunities (Casson, 1982) for the more entrepreneurial farmers to extract value from (a)paddy cultivation by coordinating/mobilizing these misallocated resources (Casson, 1982) (both land and labour) and (b)diversification into other income-generating activities. The former was clearly evident from successful farmers cultivating more than one hectare of paddy land (see Table 5.2) and the latter was evident from the existence of pluriactivity (see section 5.1.2).

On the whole, the concentration of routine crop production and marketing activities and the limited variety of (paddy-dependent) income-generating activities within a highly constrained and barren environment indicated an apparently uniform context with little superficial evidence of non-routine activities. This impression of

homogeneity is further reinforced because a large number of socio-economic activities are firmly embedded in the monoculture of the paddy (with a set way of producing and selling it - see Table 5.3).

7.1.2 Entrepreneurial diversity in the apparently uniform context

In contrast to Chapter Five, Chapter Six analysed a multitude of non-routine value extraction (Anderson, 1995; Scott and Anderson, 1994; Scott *et al*, 1996) strategies adopted by economically successful farmers. These strategies, employed two main routes, i.e. entrepreneurial and managerial. Both the entrepreneurial and managerial strategies were concerned with the extraction of value through adaptation to the environment.

7.1.2.1 Entrepreneurial value extraction strategies

The entrepreneurial strategies were concerned with discovering (Kirzner, 1984; Leibenstein, 1968) and creating (Shackle, 1979) new opportunities and overcoming the existing constraints (Vale and Binks, 1990; Vyakarnan, 1990). This was prominently apparent with regard to overcoming the constraints imposed by limited resources (Bryant, 1989; Bygrave, 1994; Hart *et al*, 1995; Kirzner, 1984; Morris *et al*, 1994; Saylor, 1987; Stevenson and Jarillo, 1990; Stevenson *et al*, 1989; Stevenson, 1997).

The main task of the entrepreneurial processes in the given limited resources context was to pursue opportunities without regard to the resources under control (Hart *et al*, 1995; Stevenson and Jarillo, 1990; Stevenson *et al*, 1989; Stevenson, 1997). This was

achieved by mobilising resources (physical and otherwise) through social networks (Johannission, 1988; Johannisson and Peterson, 1984; Birley, 1985; Starr and MacMillan, 1990; Stevenson and Jarillo, 1990; McGrath, 1996) which in turn helped entrepreneurs overcome other main constraints such as low opportunities, high cost of production (Starr and MacMillan, 1990), low product prices, high risk of default, capital/collateral requirements, shortage of labour during the peak seasons and also own knowledge barriers. These social networks were of two main types viz. (a)between the entrepreneurs and needy villagers and (b)among aspiring entrepreneurs (within and outside the village). Mobilisation of resources through social networks enabled a process of extracting value through exchange of values, resulting in symbiotic relationships. The exchange of values between entrepreneurs and needy villagers was congruent with Casson's (1982) argument regarding the co-ordination of misallocated resources (by the entrepreneurs) leading to private and social co-ordination (see section 2.6). The entrepreneur augmented the extracted values by co-ordinating needy villagers, whereas needy villagers benefited from the entrepreneur's managerial input of efficient and effective allocation of resources which permitted their survival. This confirmed the argument that the entrepreneur is the change agent of society (Broehl, 1978; Chell, 1990; Thropman and Morningstar, 1989). As a result, the entrepreneur not only extracted economic values but also social values (Anderson, 1995) such as respect and power, leading to higher social status. Exchange of values among aspiring entrepreneurs involved a relationship of trust (Arrow, 1974; Bhide and Stevenson, 1990; Granovetter, 1985; Hart *et al*, 1995). Overall the value-exchange process was synergetic, in that these processes could only take place with the presence of all the parties concerned.

7.1.2.2 Pluriactivity as an entrepreneurial value extraction strategy

The entrepreneurial drive for diversification (as argued by Casson, 1982) of the economically-successful farmers and to extract value by embracing (Clout, 1993) and maximising (Fuller, 1990) opportunities, from various niches of the surrounding barren environment had led them to be pluriactive. This resulted in combinations of income sources within and beyond the farm (Herrmann and Uttitz, 1990; De Vires, 1993) confirming the arguments that pluriactivity may be adopted by farmers to adapt to market opportunities/conditions (Edmond *et al*, 1993; Scheksmith and Smith, 1991) and other environmental changes (Fuller, 1990). These consisted of direct marketing (Herrmann and Uttitz, 1990), selling value-added products (e.g. rice) to niche markets (Wyson and Handwerker, 1989), providing services (viz. Money-lending, hiring out farm power, rice-milling) to agriculture (Herrmann and Uttitz, 1990) and secondary trades (De Vires, 1993) such as boutique-keeping, selling agrichemicals and fertilizer.

Pluriactivity was adopted by these farmers as a strategy of increasing income (Evans and Ilbery, 1993; Heron *et al*, 1994; Mackinnon *et al*, 1991; Rupena-Osolink, 1983; De Vires, 1993) by supplementing the insufficient income generated from primary agriculture (Evans and Ilbery, 1993), and providing economic security for the family (Hetland, 1986; Herrmann and Uttitz, 1990). This was in contrast to that of monoactive farmers who were highly vulnerable to unfavourable developments in primary agriculture (Mackinnon *et al*, 1991; Hetland, 1986; Herrmann and Uittiz, 1990), thus representing a capital-accumulation strategy (Evans and Ilbery, 1993; Heron *et al*, 1994; Marsden, 1990). This was also congruent with the argument that

pluriactivity may facilitate further development of the farm and the family's economic status (Herrmann and Uittiz, 1990), leading to continued viability and reproduction of the business (Evans and Ilbery, 1993).

The concept of pluriactivity (largely ignored in the literature on rural entrepreneurial processes) therefore seems to represent a strategy of pushing multiple opportunities without regard to the resource under control. This was also congruent with another entrepreneurial function, i.e. overcoming existing constraints. These were in terms of (a)reducing high risk of default and high cost of production (b)decreasing time pressure (c)reducing working capital requirements and (d)attracting customers. These also confirm the argument that the entrepreneurial processes redefine existing values (Barth, 1963), thus further confirming pluriactivity as an entrepreneurial value-extraction strategy. The other main entrepreneurial function of pluriactivity was to increase the bargaining power of the entrepreneurs over middlemen.

Pluriactivity was also adopted by economically successful farmers to expand their social horizons (De Vires, 1993), which in turn facilitated these farmers' pursuit of opportunities without regard to the resource under control. Entrepreneurial farmers were therefore improving the future socio-economic environment. This confirmed the arguments that pluriactivity, whilst influenced by economic factors (Hermann and Uittiz, 1990; De Vires, 1993), may also be driven by socio-cultural (De Vires, 1993) and/or community (Fuller, 1990) motives.

7.1.2.3 Managerial value extraction strategies

In contrast, the main managerial function (in the given limited resource, high cost and low opportunity environment), was to maximise the value-extraction per given volume of resources within the existing conditions (Giles, 1990; Bryant, 1989). Therefore managerial value-extraction represented combinations (King and Sonka, 1985) of various market-oriented farming (Brunaker, 1990; Cornelius, 1988; Lapping, 1982) and diversification (Henry, 1988; Hill, 1990; Jones, 1991; Schwab *et al*, 1989; White, 1989); strategic actions (Cornelius, 1988; Carlton and Perloff, 1990) leading to the efficient and effective allocation of resources (Ikerd, 1989; White, 1989). The eventual result was increased profit (Carlton and Perloff, 1990; Dagher and Christy, 1991; Leuning, 1989) and/or decreased cost of production (Ikerd, 1989) and adaptation to the surrounding environment (Olmstead, 1970; Gasson and Errington, 1993; Giles, 1990; Bryant, 1989, Jenssens and Krikke, 1990, Jonston and Bryant, 1987).

These combinations of (production, marketing and diversification) strategies were specific to each farmer, i.e. “farmer-specific combinations” (see section 6.3.2.3). This confirmed the argument that farmers as manager are mixers and manipulators of factors of production such as land, labour, capital, information, advice and own managerial skills (Jones, 1990).

The other vital managerial function was to manage the sustainability of pluriactivity (i.e. the entrepreneurial drive to pursue opportunities in the various niches of surrounding barren environment). This was achieved by avoiding resource conflicts,

by choosing the right combinations of on and off farm income-generating activities (Krasovec, 1983) which were complementary and supplementary to each other (Carker, 1989; Hetland, 1986; Hill, 1990; Schwab *et al*, 1989). As a result, the pluriactivity of successful farmers was centred around seasonal paddy-cultivation activities (i.e. paddy-based diversification). Decisions as to what should be consumed and what should be re-invested, e.g. delayed consumption (Kirzner, 1984; Manchin and Szeleny, 1985) were also a critical management decision made by the successful farmers in the given limited resource context. This contrasted drastically with the lavish consumption behaviours of the economically-unsuccessful farmers.

7.1.2.4 Economic success of the farmers and the entrepreneurial matching process

Economic success of the farmers in the given constrained environment was determined by both the above entrepreneurial and managerial functions. Both these functions played interdependent and complementary (Gasse, 1985) roles in the “entrepreneurial matching process” (i.e. spotting opportunities and matching them with resources) in determining economic success. In this context, the entrepreneurial function expanded the limits of the existing constraints. This was achieved by overcoming constraints, perceiving/ discovering new opportunities (leading to pluriactivity), imagining possibilities which were unconstrained by the concerns of resource constraints (e.g., ability and willingness to pursue opportunities regardless of the resources under control) and mobilising extra resources through social networks. These represented the entrepreneurial drive to achieve economic/business growth (or

create values). These functions in turn increased the need for complex management requirements.

The fundamental managerial function in this setting was to maximise the extraction of values by operating within existing constraints (including the limits expanded by entrepreneurial strategies). This was through (a)managing the entrepreneurial drive (or determining which opportunities to pursue) and (b)efficient and effective allocation of resources, representing a process of translation of the values perceived by the entrepreneurial function. Without this essential managerial function, entrepreneurial initiatives were fruitless (resulting in misallocation of resources). Capitalisation of opportunities therefore required both these functions, which were interdependent and complementary to each other. Assuming that accumulation of values (both social and economic) is a result of the entrepreneurial process, the managerial function becomes an integral component of entrepreneurial matching process. This also brings the need to integrate the functions of (a)Olson's (1987) "start-up phase creator" and "growth phase manager" and/or (b)Stevenson's (1997) "promoter" and "trustee" whilst confirming Kirzner's (1984) argument that short-run resource allocation is simply a special case of the general discovery (i.e. entrepreneurial) process. This also confirms Morris *et al*'s (1994) argument that entrepreneurial and managerial functions are necessary to achieve/maintain economic/business success. Overall it may be argued that the "matching process" represents strategic adaptation (discussed in Chapter Two) (Bryant, 1989; Kuhl and Kuhl, 1990; Low and MacMillan, 1988; Ohlmer *et al*, 1993).

It was this managerial function which most helped differentiate the activities of economically-successful farmers from those of economically-unsuccessful farmers (this can be clearly understood by comparing the facts presented in Table 5.3 with those of in Table 6.4). These managerial functions therefore played a crucial role determining survival (Giles, 1990) and failure. Furthermore, willingness to pursue opportunities (Stevenson and Jarillo, 1990) by certain farmers (i.e. unsuccessful commercial farmers) without the required managerial skills led to a development of a group of followers in the location. The activities of these followers also demonstrated the fact that availability of resources, although necessary, is not a sufficient condition to survive (cases 3, 253 and 275) and to achieve subsequent economic success. This also confirmed the argument presented in Chapter One that not all small business operators are entrepreneurs (Bryant, 1989; Kirchhoff, 1994; Saylor, 1987; Wortman, 1990b). The existence of socio-economically successful non-farming families (who were originally allocated only half an acre of homestead lands, e.g. cases 119 and 288), by their acquisition of lands, demonstrated that entrepreneurial growth is not constrained by limited physical resources.

7.2 Theoretical implications

This thesis has clearly distinguished the different tasks of the entrepreneurial and managerial functions. It has also illustrated how entrepreneurial and managerial value-extraction strategies complement each other in the entrepreneurial matching process, confirming that managerial function is an integral component of entrepreneurship. It may also be concluded that entrepreneurial and managerial functions are interdependent elements of the total business process in the socio-

economic success of rural farmers. On the other hand this thesis has also clearly indicated that certain entrepreneurship and strategic management principles, which have been found applicable to the affluent Western world, are also relevant for small-scale rural farmers in the third world context who might be expected to struggle in abject poverty in order to scrape an existence.

Furthermore, the thesis contributed a novel dimension to entrepreneurship literature, which is how “pluriactivity” has been adopted as an entrepreneurial value-extraction strategy. This study also clearly illustrated how the terms “pluriactivity” and “diversification” can be utilised in relation not only to two subject areas, i.e. entrepreneurship and management, but also to explain the same phenomenon, i.e. economic growth of farmers - thus demonstrating that these two terms can still be used effectively in tandem without the need for debate on definitions (see Evans and Ilbery 1993) of each. Indeed, in the light of the findings of this thesis, it may be argued that the two activities of entrepreneurship and management are very much interrelated.

7.3 Policy implications and further research issues

Although the study was not concerned with economic development policy issues, certain further research suggestions in terms of policy implications can be made. From the understanding of village-level socio-economic processes, it may be argued that macro-scale policies (as opposed to participatory community-level approaches) are ineffective in achieving economic development

It follows that the primary focus of economic development should be at the micro level (i.e. addressing the family and community). The objectives of such policies (which may be implemented through community leadership) should be to achieve changes within the community (with relevant implications for regional and/or national issues), thus obviating the appropriateness of the traditional measures of economic development such as “equal income distribution”. Further research may be focused on formulating appropriate measurements of economic development in terms of socio-economic changes achieved in the community level.

The study also demonstrated the shortcomings of the agricultural extension and support services due to the higher production orientation of many of their activities. Interestingly, it was the finding of this study that economically-successful farmers were those who did not blindly follow the advice of extension and support services. Furthermore, these findings suggest that there will be benefits in a significant shift of policy focus from a “farming success” to the “economic success of farming families” (Mackinnon *et al*, 1990). Therefore further research aimed at implementing policies to encourage pluriactivity (rather than focusing on diversification within the primary agriculture i.e. from paddy to OFC varieties) is warranted.

7.4 Methodological implications, limitations of the study and further research issues

This study should be seen as an initial attempt to explore the role of entrepreneurship in determining the economic success of farmers in Sri Lanka. The study demonstrated that research on economic success and failure should be community- based. The

adopted multiple embedded case-study strategy, demonstrating the inappropriateness of pre-coded quantitative research strategies, has contributed holistically to an increased understanding of the dynamics of the total business processes. Furthermore, it also demonstrated that the key informant technique is the most appropriate method to identify relatively successful and poorer groups of farmers in a given location. This was because success as a result of the entrepreneurial processes is both economic and social, and hence relative and known only by community members. In spite of these methodological contributions, however, a number of limitations could be highlighted with a view to improvements in the methodology for future research. These are:

- (a) although the study was able to demonstrate the integrated and interdependent nature of both entrepreneurial and managerial functions, it was not capable of giving a quantitative measure of how interdependent the entrepreneurial and managerial processes (in relation to various success levels) are. Therefore future research may be focused on developing quantitative measures so as to determine the relative degrees of integration of optimal managerial and entrepreneurial functions, and their relationship to varying degrees of economic success. Once appropriate measures are developed, they could be used as tools to determine whether these requirements vary from one location to another and/or one season to another. These would be useful in formulating appropriate policies (i.e. to determine what types of interventions are necessary and what are detrimental) to deal with more complex dynamic situations than the traditional measures of economic development are capable of.

(b) the study was not concerned with the quantification of monetary inflows and outflows (neither at family nor village levels). Quantifying these figures may be useful in further increasing the confidence of future research findings.

(c) similar research in the future might be carried out with a Type I village. (see section 4.2.2.1.1) which will enable a measure of the impacts of long-held socio-economic relationships in determining economic success. A potential research question for research in a type I village might be, for example, “have the economically-successful families who’ve migrated from distant villages been able to maintain the economic success in their present villages?”.

Lastly, this research can also be considered as an initial attempt to establish the applicability of certain strategic management principles to small scale Limited Resources Farmers in Sri Lanka. Future research therefore might also focus on the detailed strategic decision making process of farmers including, for example, the role and impact of family participation.

End ...

back to the grassroots: a personal note

The word “entrepreneur” first appeared in the writing of Richard Cantillon in 1755, who used the term to describe “farmers” who exercised business judgements in the face of uncertainty. Since then the field of entrepreneurship has been on a long journey ever expanding its boundaries from personal attributes to firm level analysis and beyond. This thesis, however, has once again signalled the relevance of some personal attributes to the socio-economic success of farmers whilst demonstrating the advantages to be gained from taking into account the agricultural context in analysing entrepreneurship. I have returned to the starting point by suggesting that research into the relevance of personal attributes to the socio-economic success of farmers at the grass-root level provides a worthwhile means by which to further enhance our understanding of entrepreneurship.

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APPENDICES

APPENDIX 1

Personal And Behavioural Attributes Of The Farmers And Their Relevance To Farming Success

A1.1 Farm success, values and beliefs

Johnson *et al* (1987:46-47) point out that the value system is a main component of economic success of the farmer. The point, that values have either favourable or unfavourable connotations for the well being of the individual (or of the group), was made by Wilkening (1954:39) too. According to Fuller (1989:7) “values” and “beliefs”, by influencing the way that farmers set their goals, contribute to the successful management of the farm. Furthermore, a multitude of authors have pointed out that “values” operate as the criteria for making choices between alternative courses of action or between action and no action (Dodd, 1951; Harding, 1948; Jones, 1990; Lundberg, 1950; Parsons and Shills, 1951; Vernon and Allport, 1931).

As far as empirical evidence is concerned, Wilkening (1954:39) points out that the value placed on hard work and thrift is important for success in farming (p40). The other examples for major areas of values which are relevant to farming success according to the same author are material possession, family expenditures, social participation, education and also the value put on time (p40). Jacobsen (1990:86) notes that “time” is the most valuable and most limited resource of the farmer. In this context, James (1990:12) argues that taking actions at the right time in the context of changing environmental factors is of crucial importance to farm success, which emphasises the need for farmers to put a higher value on time.

A1.2 Farm success and farmers' attitude

According to Carkner (1989:52) personal preferences play a major role in narrowing down the fields of alternative enterprises adopted by the farmer. Fuller (1989:8) argues that a positive creative attitude is required by the farmer to change a problem to an opportunity. Having a positive attitude is important both in the case of new technology (Fuller, 1989:10) and also in the case of advisory and extension services. Fuller (1989) by proving the importance of a better attitude towards new technology, points out that many successful farmers are early adopters of new technology .

As far as the advice and extension services is concerned, it has been noted by Norman (1990:27) that knowing which advice to accept and which to reject is an important determinant of farm success. In this context, he points out that successful farmers/farm managers consider carefully and ‘weigh in the balance’ the advice available to them (p 27).

A1.3 Farm success and information

The above discussed requirements warrant the need for farmers to access various types of information. In this context Edelman, *et al* (1990:122), note that access to information has direct implications on sales and profits of agribusiness mainly in deregulated market environments (like in Sri Lanka). Relevant information for farm management according to Norman (1990:17) comes from both within and outside the business. In a similar way Gasson and Errington (1993:26) point out that information on available options for farmers and their likely consequences come from two distinct

sources viz.: (a)all the information external to the decision maker and (b)information currently stored in the decision maker's brain (mostly commonly labelled as "experience") . According to Carkner (1989:53) the latter source of information (i.e. experience) influence choice (e.g. when selecting alternative enterprises etc.)

A1.4 Farm success and risk

Gasson and Errington (1993:27) argue that the management of biological systems-which is an unique aspect of farm management-presents a particular challenge to the farmer because of the heterogeneity of some of the inputs (i.e. variation in soil quality, crop and livestock varieties etc.), and the unpredictability of the weather (rainfall, sunlight) and interaction among them. These complexes, according to the same authors, increase the unpredictability of outcome and increases the risk associated with production which emphasises the control function of management thus demanding a continuous direct monitoring of the production process (p. 27).

Furthermore, as already has been discussed above, the lack of certainty about the occurrence of future events in the above discussed farming environment creates risks (Schwab *et al*, 1989:151). Nelson (1989:36) identifies seven types of such risks viz.: (a)market risk created by the fluctuation of prices due to demand and supply fluctuations (see Cornelius, 1988:32 too), (b)production risk created as a result of variability in production caused by unpredictable natural environmental factors (i.e. weather) and genetic variations, (c)obsolescence risk created due to the current technology becoming dated as a result of the rapid development of new technology (d)casualty risk created due to loss of assets as a result of such events as fire, wind, flood and theft etc. (e)legal risk created due to changes in government laws and regulations (f)human risk created due to changes in character, health and behaviour of individuals such as the possible losing of a key employee during a critical stage of production and finally (g)financial risk.

It has also been argued by Nelson (1989:35), that successful farm management depends on taking risks that are consistent with the goals and financial position of the business. The key success of a farm, according to Nelson (1989) and Fuller (1989:8), is dependent upon a clear understanding of the various sources of risks, their chances of occurrence including their implication for the economic performances of the business and taking the right risk through managing it. Nelson (1989) further argues that identifying these right risks requires a better understanding of the various sources of risks, their chances of occurrence, and their implication for the economic performance of the business.

APPENDIX 2

Qualitative Methods

A2.1 The term “qualitative methods”

Qualitative methods may be described as an umbrella term for an array of interpretive techniques which seek to describe, decode, translate, the meaning-not the frequency-of more or less naturally occurring phenomenon in the social world (Van Maanen, 1979:520). They are described as "thick" (Geertz, 1973:6), "deep" (Sieber, 1973) and "holistic" (Rist, 1977:44 In McClintock *et al*, 1979:612; Weiss, 1968:344; Jick, 1979:609). They also help reveal complex patterns, and a rich variety of interconnections (Gummesson, 1992:15). Qualitative research begins by accepting that there is a range of different ways of making sense of the world (Jones, 1995:2) and the meanings perceived by those who are being researched and with understanding their view of the world (Jones, 1995:2; Pope and Mays, 1995:42; Van Manen, 1977; Miles and Huberman, 1994:10). These methods may also be especially useful in eliciting data and suggesting conclusions, which other methods may not detect (Jick, 1979:603).

They may capture of the frame of reference and an informant's definition thus avoiding standardized measurement procedures (*in qualitative research according to Jones (1995:2), explanation replaces measurement and understanding replaces generalizability*). This allows detailed examination of organizational processes and identification of factors peculiar to each case that may allow greater understanding of causality (McClintock *et al*, 1979:612).

According to Pope and Mays (1995:42), such methods allow the research to go beyond "snap shots" of "how many" to just "how" and "why" things happens (i.e. studying processes) which statistical analysis is unable to fulfill (Miles and Huberman, 1994:10; Stoecker, 1991: 94).

Data generated by qualitative research is contextually embedded (Van Maanen, 1979:521; Miles and Huberman, 1994:10) in that they help to understand a given piece of observed behavior in its context (Van Maanen, 1979:521; Miles and Huberman, 1994:10). The distance between context and action is reduced by operating in a qualitative mode (Van Maanen, 1979:520). Hence the goal of qualitative research is the development of concepts which help to understand a social phenomena in their natural setting (Pope and Mays, 1995:42).

Furthermore, qualitative data is generally superior to quantitative in terms of density of information, vividness, and clarity of meaning - a characteristic very important in holistic work (Weiss, 1968:344; Jick, 1979:609). Consequently, Bonoma (1985:203) argues, that qualitative research is the major or perhaps the only valid knowledge accrual device for studying human behaviour.

A2.2 Qualitative research: need for theoretical framework

Yin (1981:61) argues that to determine what is "meaningful" requires some sense of what the case study is all about. He stresses that the central question of the case study need to be identified before hand (Yin, 1981:61), is in order to avoid the temptation of collecting "everything" (Yin, 1994:21). He also argues that a theoretical framework must be developed whether the study is to be explanatory, descriptive or exploratory (Yin, 1994:28). Yin also argues that a theoretical framework helps to (a)define the appropriate research design and methods of data collection and (b)generation of results (1994:32).

Similarly Hartley (1994:171) argues that without a theoretical framework, a case study may produce fascinating details about life in a particular organization but with no wider significance. He also argues that (1994:217), although the theoretical framework at the beginning may not be the same one that survives to the end, such focus avoids the dangers of becoming overwhelmed by data¹ or drawn in to narratives.

Additionally Cochrane (1987 in Stoeker, 1991:103) argues that research not guided by theory is only an accumulation of anecdotes and that the general process have different outcomes in different localities. According to Smith *et al*, (1992:74), researchers with a framework are able to make choices as they collect data as to which line of inquires is to be explored and which is to be discarded. This, according to Miles and Huberman (1994:17) provides clarity and focus particularly for inexperienced researchers concerned about "diffuseness" and overload. They also argue that it enables researchers in a multiple case study to coordinate their data collection even more closely (1994:20). On the other hand, a theoretical framework enables the researcher to do sampling by looking at only some actors in some context dealing with some issues and relationships (Miles and Huberman, 1994:22).

A theoretical framework is also important in data analysis, helping to focus attention in relevant data and eliminating irrelevant variables (Bryman and Burgess, 1994:5; Jick, 1979; Miles and Huberman, 194:16-23; Ritchie and Spencer, 1994:176; Yin, 1994:104).

A2.3 Qualitative research: need for theoretical sampling

Johnson (1990:27) argues that systematic, theoretically determined sorting of cases ensures more complete coverage of phenomena under study. This also allows comparability across a range of diverse groups allowing categorization and helping to identify emergent theoretical properties (Miles and Huberman, 1994:17-18; Johnson, 1990:42). This was a major objective of the current study.

Moreover, a theoretical sampling strategy ensures a careful consideration of what groups to observe, where and when to observe them, when to stop observing them and also what data to gather (Burgess, 1982:75). Once collected data is analyzed, refinements are made to the theory, and this may in turn indicate further sampling is required and determine the nature of the technique (Pope and Mays, 1995:110) such

¹See Eisenhardt, 1989:536-93p for a similar argument.

as what to collect next and where to find it (Glaser and Strauss, 1967: 45 in Burgess, 1982:75; Gummesson, 1991:84).

APPENDIX 3

System B of the Accelerated Mahaweli Development Project

A3.1 An introduction to System B

System B is a contiguous area of land that lies in the Eastern part of the Dry Zone of Sri Lanka. This is the largest System of AMP. Total land area of the System B falls within three administrative districts viz. Polonnaruwa in the North Central Province and Batticaloa and Ampara in the Eastern Province (hence under continuous terrorist threats of Tamil separatists (i.e. LTTE) since 1985). System B lies in the North-East of the recently developed Maduru Oya reservoir¹ the first of the four major headwork completed under AMP - in July 1983.

The total land area of System B is around 135,000 ha, of which about 36,000 ha has been allocated for irrigated (to be irrigated by Maduru Oya reservoir) agriculture. System B is designed to be served by two major irrigation canals i.e. the Left Bank Main Canal (LBMC) taking off from the saddle dam on the Left Bank of Maduru Oya and Right Bank Main Canal (RBMC) of the river at the end of the main Dam. Based on these two canals, System B is divided into two main sub divisions viz. System B Left Bank and System B Right Bank. For the convenience of financing, implementation and management, System B is further divided into eight zones and eight administrative Blocks.

The Left Bank consists of Zones 1 to 5, covering a gross area of 85,000 ha. The net irrigable area of new lands of the Left Bank is about 22,000 ha (viz. Zones 1, 2, 3, 4A, 4B and 5). Right Bank (which has not yet been developed) consists of the remaining 50,000 ha in which the estimated net irrigable area of the new lands (zones 6,7 and 8) is about 14,000 ha, giving a total of 36,000ha of irrigable land in System B. About 54 percent of System B was under dense forest cover prior to the development activities.

Development work on System B started in 1978. The initial stages of the development work included the establishment of a site construction office (and also camps for the larger number of staff required for construction, settlement activities and for the investigations of the main and branch canals to be constructed in the system) of Mahaweli Development Board (now Mahaweli Engineering and Construction Agency-MECA- of Mahaweli Authority of Sri Lanka- MASL) in Aralaganwila.

Construction of the Mduru Oya reservoir (with a capacity of 485 million cubic meters which is enough to irrigate about 50,500 ha of land) commenced in 1980 and completed in 1983. Impounding of the reservoir commenced in 1982, and the first water issue was carried out in 3rd July 1983.

¹Which is augmented with the water of Mahaweli river, diverted at the Minipe anicut and conveyed, through the Right Bank Trans Basin canal (30.8 km long) of Ulhitiya-Rathkinda reservoir and then through a 5.7 km long link tunnel.

A3.1.1 Settlement plan

The settlement plan of System B indicates the areas of irrigable lands and highlands. Irrigable lands are blocked out into one hectare allotments and highland allotments are 0.5 acre each. Settlers highlands are organized into Hamlets (i.e. cluster of settlers living in a one geographic area) where community infrastructure facilities are built. In addition, lands are blocked out for various other purposes too. For example, irrigable uplands (with a maximum limit of 50 acres per individual) which are assigned to Zone one of the System B to be leased out on annual basis for outside investors. Land allocation for commercial purposes is carried out by EIED (Employment, Investment and Enterprise Development) of Mahaveli Authority of Sri Lanka (regional office is located in the System B project Office).

A3.1.2 Community centres

There are three major types of community centres in System B viz.

(a)Hamlet centres: Each administrative unit has its own community centre, which has been designed to serve approximately 250 settler households. A unit service centre, co-operative shop, official quarters, a primary school, play ground, nursery school, and a temple is located in each hamlet centre.

(b)Village centre: This is to provide services for several hamlets (i.e. in an administrative Block). Usually the Block office is located in this centre. A senior secondary school, post office and a medical centre are also located in each Village centre.

(d)Townships: System B has four major townships, viz. Welikanda, Kolongas Handiya (Aralaganwila), Manampitiya and Siddapura. These are similar to modern towns, each comprising a hospital, main bus station, police station, central school and a main post office.

A3.1.3 Policy of land alienation

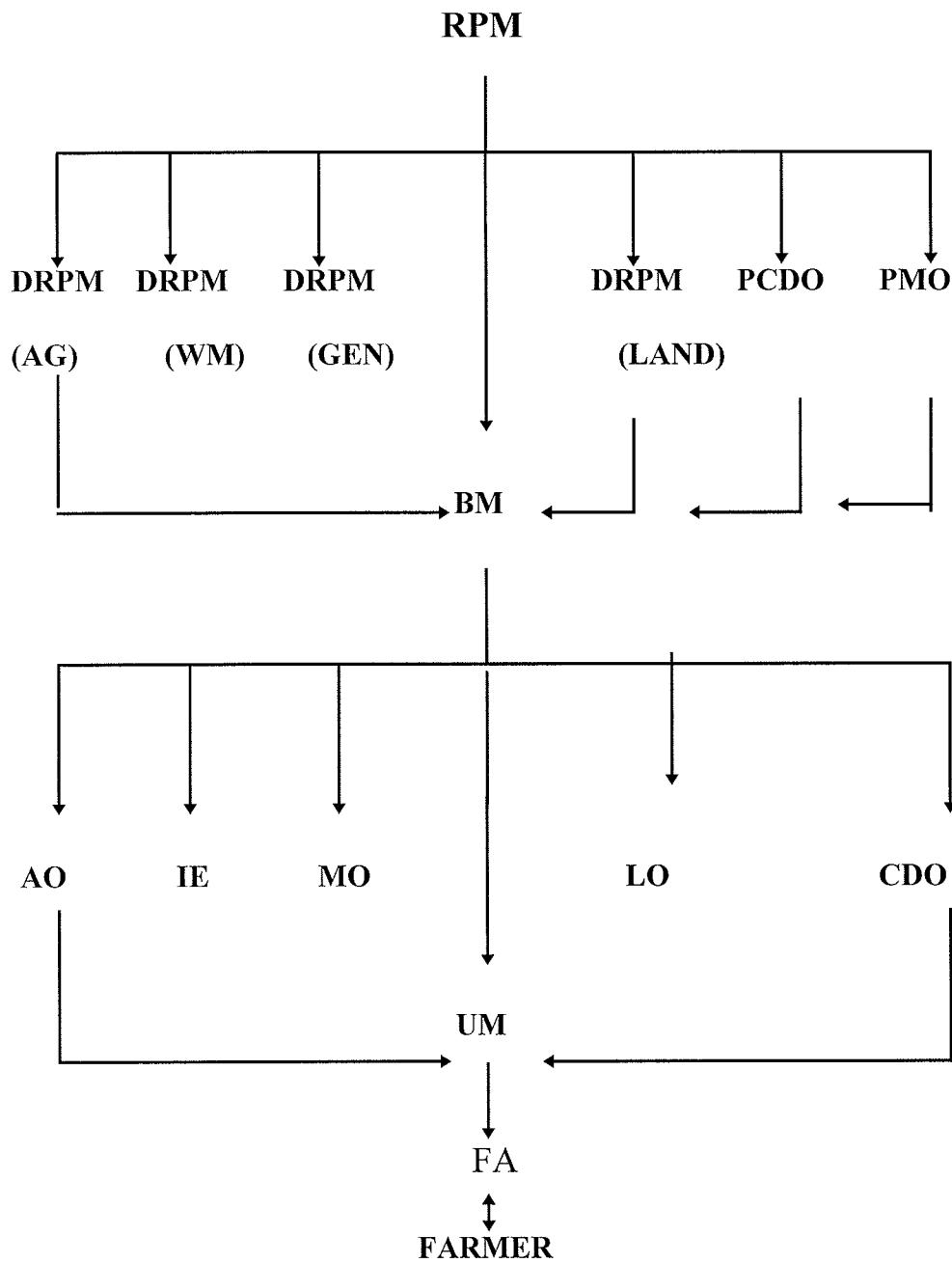
Land allocation for peasants is implemented under Land Development Ordinance (LDO) whereas land for commercial and public purposes is allocated under the provisions of Crown Land Ordinance. There are specific rules and regulations to prevent either sale, lease, mortgage or fragmentation (by inheritance) of land allocated to peasants. The major objective of these restrictions is to achieve an egalitarian rural agrarian society.

A3.1.4 Administrative structure of System B

System B is administered by the Residential Project Manager (RPM), whose office is situated in Welikanda (which is one of the main townships in System B). There are four Deputy Residential Project Managers (DRPMs). These four DRPMs are in charge of General Administration, Agriculture, Water management and Lands. There are also various other officers assigned to different subject areas who are accountable to the DRPMs.

There is also a block office in each of the eight administrative blocks, each headed by a Block Manager (BM). BMs are assisted by various officers in different subject areas such as Land, Irrigation, Agriculture, Community Development and General Administration. Furthermore, each block is physically divided into administrative units (i.e. hamlets) which are managed by a Unit Manager (UM). Each UM is assisted by a Field Assistant (FA), Farming System Extensionists (FSE), Technical assistant (TA), Irrigation Community Officer (ICO) and a Jalapalaka (i.e. field level water manager).

Figure A3.1: Organizational Structure of System B of the AMP



Key: RPM (Residential Project Manager), DRPM (Deputy Residential Project Manager), AG (Agriculture), WM (Water Management), GEN (General administration), PCDP (Project Community Development Officer), PMO (Project Marketing Officer), AO (Agricultural officer), IE (Irrigation Engineer), MO (Marketing Officer), LO (Land Officer), CDO (Community Development Officer), BM (Block Manager), UM (Unit Manager), FA (Field Assistant)

A3.1.5 Agricultural extension an support services

The Deputy Residential Project Manager (DRPM) of Agriculture is Responsible for extension services in the System. DRPM (Agriculture) is co-ordinated by a senior agronomist in the MASL (Mahaveli Authority of Sri Lanka) head office in Colombo. AO_s, UMs and FAs are in the agricultural extension network headed by the DRPM (AG). FAs are the grassroots level link between the Farmer and the higher level extension officials. Usually one FA is assigned for about 250 farmers (i.e. for one administrative unit/village). They are working through a Training and Visit (T &V) system. DRPM links up the agricultural extension work in the Mahaveli area with the Department of Agriculture (DOA). The Mahaveli agricultural staff along with the officials of the DOA undergo pre-seasonal training on various aspects of farming prior to each season.

A3.1.5.1 Extension and support services provided by MEA/MARD project

Mahaveli Agricultural and Rural Development project (MARD) was commenced in September 1988. This project is funded by the USAID and the government of Sri Lanka. MARD works in co-operation with institutions such as Mahaveli Economic Agency (MEA), Mahaveli Engineering and Construction Agency (MECA), Employment, Investment and Enterprise Development (EIED) and also Department of Agriculture (DOA). The main aim of this project is to encourage the farmers to diversify into alternative commercial crops such as gherkins, silver melon, grapes, asparagus etc., from traditionally cultivated paddy. This aim is to be achieved through providing, technical know-how, agricultural inputs and marketing facilities etc. MARD have engaged 13 Farming System Extensionists (FSEs) in three Blocks. Furthermore MARD, in collaboration with DOA, conducts feasibility on-farm trials of new crops before they are introduced to the farmer. This project also provides assistance to large scale commercial companies and/or out to growers operating in System B.

A3.1.5.2 Agricultural credit for farmers

Cultivation loans are arranged for farmers on the certification of Unit Managers. Loans are granted for farmers based on credit worthiness (i.e. based on the re-payment of their previously obtained credits) of the farmers. Two public banks (Bank of Ceylon and People's Bank) are engaged in issuing cultivation loans. Seylan Bank, a leading private bank in the country, provides farmers with various credit facilities for starting small enterprises. Furthermore, the Rural Development Bank is also operating in the System B.

A3.1.5.3 Fertiliser and agrochemical

Multi-Purpose Co-operative Society (MPCS) in Dimbulagala is the main supplier. There are also private traders (who are agents of various commercial organisations and/or Ceylon Fertiliser Co-operation) in main townships and in village centres. Mahaveli Economic Agency (MEA) too, involved in distributing necessary agricultural inputs through its network of Project, Block and Unit offices.

A3.1.5.4 Water management

Irrigation water distribution in the system is carried out according to a work plan, which is formulated prior to each cultivation season. This schedule indicates the operation requirements of water in the System B. First, a work plan for each block is prepared by the respective Irrigation Engineers (IEs). This is based on the information collected by the Engineering Assistants (EAs) at TO and D channel levels. This information is then conveyed to the DRPM (WM) at the Project Office, based on which a work plan for entire System is prepared. It is according to this plan that water is released from Maduru Oya reservoir.

Following is a list of factors which are considered when preparing the above work plan.

- (a)extent of each crop to be cultivated (i.e. the crop water requirement)
- (b)climatic factors such as rain fall, temperature, humidity which affect evapo-transpiration.
- (c)soil condition at each TO level (which determine infiltration and seepage of water).
- (d)efficiency of the distribution of water through main, distributory and field canals.

Supply of water to the farm from the reservoir is made through following sequence of canals:

- (a)Main canal to which water is released from the reservoir
- (b)Branch canal
- (c)Distributory canal and Sub D-canals (“*Bedum Ela*”)
- (d)Field channel (“*Keth Ela*”)
- (e)Farm Turnout (TO).

Distribution of irrigation water up to the turnout level is the responsibility of Mahaveli Economic Agency. Farmers are responsible for (a)distributing water within the turnout area and also for (b)maintaining the field channel and canal roads in order have a better water distribution within each turnout area. This is usually the responsibility of each field channel society.

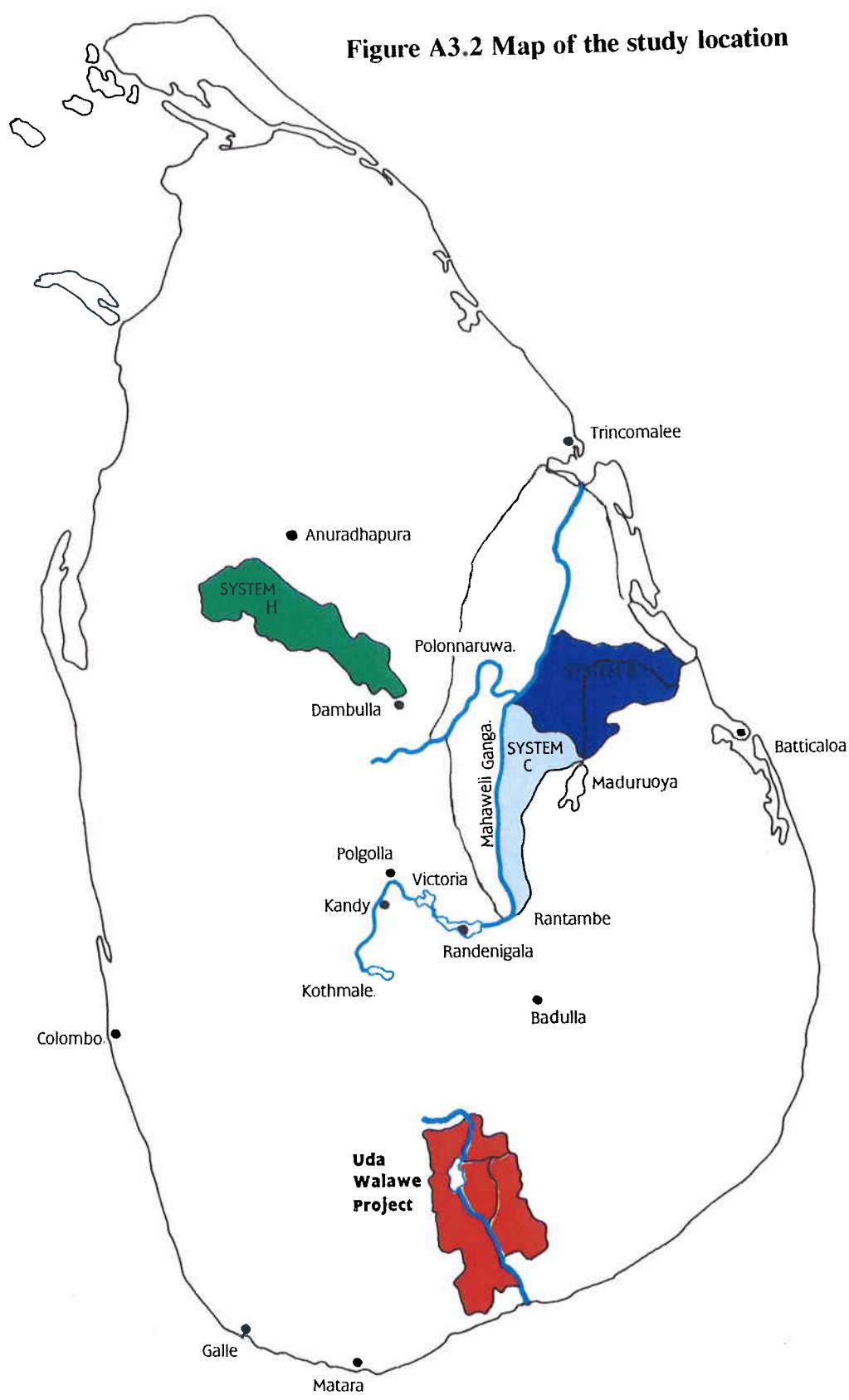
A3.1.6 Farmer organizations in System B.

Farmer Organisations (FO) in Mahaveli System B are formed based on the Turnout (TO) level and the Distributory Canal (DC) levels. FOs in System B were initially established when farmers first received their irrigated paddy land allotments. The project office stipulates through an office circular that farmers of each TO (i.e. Field Channel) should be organized around a leader and a sub leader, primarily for water management purposes. These societies are designated as Turnout Group TOGs (or Field Channel Societies). Each TOG is registered with the Mahaveli Economic Agency (MEA) through the respective Block Office. Farmers (i.e. TOGs) at each Distributory canals are organized into larger farmer organizations called Distributory Canal Farmer Organization (DCFO). Depending on the number of distributory

canals, there may be more than one such FOs in each administrative unit (i.e. village). Following are the major tasks expected (by MEA) to be carried out by FOs.

- (a)to encourage farmers to join MEA staff to share responsibility and authority in water management at the tertiary level. This involves development of skills among farmers to handle simple tasks initially at the F-channel level and later more complex tasks at the D-canal level;
- (b)to organise farmers to reach agreements on cropping patterns in each season and to plan water requirements weekly with the assistance of Operations and Maintenance (O&M) staff;
- (c)to organize and train farmers to handle contracts as TOGs and to collect O&M fees; and
- (d)to organize and train farmers to deal with their production, input and credit needs, extension, and marketing activities through group action (Perera, 1990).

Figure A3.2 Map of the study location



A3.1.7 Settlement activities in Elleewawa block

Settlement activities in the Elleewawa block started in 1983². This block consists of 7420 ha (i.e. 3215 ha of uplands and 2289 ha of irrigated lowlands). Two thousand nine hundred and forty three (2943) upland allotments (0.5 acre each) and 2192 irrigated low land allotments (1 ha or 2.5 acres each) have been allocated among 2943 settler households (2192 farming families, 139 non-farming families and 612 “*Anupaul*³”).

Each farming family has been allocated 1 ha of low land and 0.5 acre of up lands. Non-farming families and the offspring of the original settlers have been allocated only 0.5 acre of uplands. Apart from this, about 1477.4 ha has been assigned as irrigated uplands to be leased out for outside investors.

Of these thirty one (31) allotments (ranging from 0.8 ha to 20.4 ha allotments) have already been leased out.

A3.1.8 Settler composition of the study village

Settlers in the selected village are non-evacuees (see table 4.3). The village consists of 317 settler households:

- (a)236 farm families;
- (b)22 non-farm families and;
- (c)59 offspring families (“*Anupaul*”). (note that both “*Anupaul*” and “non-farming families” were categorized as “non- farming” families for sampling purposes, thus a total of 81 non- farming families in the village-see table 4.4).

In addition there are 57 highland allotments, (0.5 acre each) yet to be allocated.

²The settlement activities in the selected study village commenced in 1984.

³Offspring of the original settlers had been allocated land in subsequent years of 1990, 1991 and 1992.

APPENDIX 4

Village Boutiques, Other Farming Activities, And Hidden Land Tenancies

A4.1 Village boutique business

Keeping “village boutiques” was one of the most popular off-farm business activity in the village. Starting a boutique was regarded by most of the (unsuccessful) villagers as climbing one step in the economic success ladder (i.e. a way of showing off to fellow villagers). This activity was mentioned by most of the economically-unsuccessful farmers as their expected first non-farm diversification activity. There appeared to be frequent “starting ups” and “closing downs” (it is one of the easiest business to start) of the boutiques in the village. The boutiques operated in the location for more than two years were owned only by the economically-successful farmers. The basic characteristics associated with these boutiques are presented in Appendix table A4.1.

Table A4.1 Basic characteristics of village boutiques

| Basic characteristics of the boutiques in the village* |
|---|
| <p>(a) located in the home of the keeper, mostly in a room.</p> <p>(b) run by the family members (no hired labour involvement).</p> <p>(c) cater for day-to-day consumption needs of the fellow villagers.</p> <p>(d) goods are usually bought wholesale on cash (from wholesalers in near by towns and/or vendors who come to the Sunday fair) and sold to villagers mainly on credit (except in the harvesting season). As a result boutique keepers are highly exposed to the risk of bad debts. Furthermore, goods are also found to be exchanged with paddy (barter) by some boutique keepers.</p> <p>(e) prices of the goods are arbitrarily decided by the boutique keepers (usually after adding the transportation cost to the whole sale price), therefore possible slight price variations among different boutiques. However, most of the villagers are not in a position to exploit these price differences as they have to maintain their relationships with a particular boutique owner (as purchases are mostly based on credit-see section 5.3.2).</p> <p>(f) boutiques are usually operated throughout the year, until about 11 p.m. every day. Furthermore, they are found to be the most popular social gathering points (where men chat, gossip and exchange information).</p> |

*These characteristics closely match with the findings of Lundquist, 1978 in System H of AMP.

A4.2 Other farming activities

Apart from paddy, cultivation of OFC and keeping cattle for dairy and draught purposes were the only other farming activities found in the village. Cultivation of OFC, in general, was a less popular commercial activity mainly due to its labour-intensive (as these activities demand more care and attention) nature. There were three purposes of OFC cultivation i.e. (a)commercial only (b)home consumption only and (c)home consumption and commercial purposes.

OFCs cultivated for commercial purposes were restricted to a limited variety such as chilli, gherkin, silver melon and onion. Among them gherkin and silver-melon were cultivated by farmers on buy-back agreements with two export oriented companies operated in the area (supported by MARD project). Of the 49 commercial families

(i.e. both successful and unsuccessful) only about 24 percent (i.e. 12 out of 49) families carried out this activity on a commercial scale.

A clear difference was observed between successful and unsuccessful families in relation to the OFC cultivation for home consumption (i.e. most of the economically-successful farmers cultivated OFC for home consumption whereas the majority of the economically-unsuccessful farmers depended on the “village Sunday fair” for their day-to-day vegetable requirements). For example, of the 37 successful farmers, 28 (i.e. 75 percent) of them cultivated OFC for home consumption. This figure for studied unsuccessful farmers (including the 19 brief interviewees) was 7 out of 32 families (i.e. 23 percent). OFC cultivation by successful and unsuccessful farmers is depicted in the Appendix table A 4.2.

Table A4.2: Different purposes of OFC cultivation by the villagers

| | Commercial only | Home consumption + commercial | Home consumption only | No OFC |
|--|-----------------|-------------------------------|-----------------------|--------|
| Successful families (population of 37) | NIL | 10 | 18 | 09 |
| Unsuccessful families (a sample of 32) | 01 | 01 | 06 | 24 |

Dairy cattle keeping was adopted by five successful farmers as a main income-generating activity. This figure for non-commercial economically-unsuccessful farmers was about 58 families. None of the economically-unsuccessful commercial farmers were found to be carrying out this activity. Milk produced by the villagers was collected by the milk collector (case 91) on behalf of the Kuduruwela Milk Producers Co-op. Monthly payments were made to milk producers by the Co-op. The price for milk was determined based on the fat content.

Ten out of 37 economically-successful farmers had their own draught animal (mainly buffaloes). They use these animals both for hiring out and for own land preparation activities. None of the economically-unsuccessful commercial farmers possessed a draft animal. 15 of the economically-unsuccessful non-commercial families owned their own draft animal. They mainly use these animals for their own land-preparation activities.

A4.3 Hidden land tenancies in the village

Although the “farmers” started with the same land area, it was found that about 55 percent of them have lost control of their land either completely or partially (see Siriwardena, 1981 for similar findings in System H of AMP). Control of these lands (at the time of field study) has been taken over by around 42 families (i.e. 28 economically-successful commercial farming families, 5 economically-successful commercial non-farming families and 9 economically-unsuccessful commercial farming families). It was interesting to observe that some of the (successful) non-farming entrepreneurial families (at least 5 families) who, after starting with their 0.5 acre of homestead allotments, have taken over the control of some of these paddy lands. This has eventually led to the control of more than half of the paddy land area

of the village by a minority (i.e. about 13 percent of the total population) of inhabitants (see Appendix table A4.3). It should however, be noted that some of the farmers (i.e. about 9 economically-unsuccessful commercial farmers) who had (temporarily) taken over the control of lands were simply followers and most of the time ended up in failure and debt. These farmers, were driven by either (a)their desperate need to come out of the vicious cycle they are trapped in or (b)the desire to attain a higher social recognition among the fellow villagers (by means of showing off), but without necessary managerial and/or entrepreneurial talents)

There were four different types of hidden tenancies found in the village viz. (a)mortgaging (*Ukas*) (b)leasing (*Badu*) (c)one third basis (*Thunen panguwa*) and (d)fixed yield basis (*Wee poronduwa*).

Table A 4 .3: Hidden land tenancies in the village

| | Mortgage (<i>Ukas</i>) | One third basis (<i>Thunen panguwa</i>) | Leasing (<i>Badu</i>) | Fixed yield basis (<i>Wee poronduwa</i>) | No. of farmers lost the control of land | No. of farmers lost the control of land as a percentage to the total farming population |
|------------------|-----------------------------|--|----------------------------|---|---|--|
| Entire land | 36 | 25 | 05 | 35 | 101 | 42.79 |
| Part of the land | 13 | 08 | 03 | 11 | 28* | 11.86 |

*seven farming families have given their land based on more than one basis.

In the case of mortgages, control of the land is taken by another farmer for a lump sum of money. Usually the amount ranges from RS 25,000 to 50,000 per hectare - which is fairly expensive in terms of Sri Lankan peasant standards. The person who takes over the control, works the land in lieu of interest until the owner gets the land settled by paying the amount he/she initially obtained, which sometimes never occurs in his/her life time. This is the most favorable transaction for the person who takes control, as he/she can develop the land and therefore have long term returns from his/her investment. This transaction usually occurs between an economically-successful farmer and a very poor farmer who does not have any bargaining power.

In the case of “*Wee poronduwa*” (i.e. fixed yield basis), the land owner hands over control of his her land to another farmer who works the land but gives a fixed amount of yield to the land owner at the end of each season. This amount varies from season to season. The usual amount is 12 bushels per one bushel of land (i.e. the area of land which requires one bushel of seed paddy to cultivate it-usually one fifth of hectare) in Maha season and 10 bushels per one bushel of land in Yala season. This transaction is favourable to the person who takes the control of the land as he/she settles a fixed amount of paddy regardless of the yield levels. However, this transaction may not be as favourable as mortgaging (since the land owner, given his bargaining position¹, may demand the land back at any time). However, given the resource limitations (of the person who take the control) and the level of trust involved between the two parties, this may become the most favourable deal for the farmer who takes control. Usually the bargaining position of the land owner in this transaction is a little higher than that in the mortgaging case.

¹ depending on the fertility of the land and availability of other customers etc.

In land leasing, control of the land is taken over only for a fixed duration. Usually payments for this transaction are based on land area/per season. The price found in the village was RS 1000 per one bushel of land per season. As far as the land owner is concerned, this is much more favorable arrangement as he/she regains control of his/her land after a fixed duration.

In the one third basis, control of the land is handed over on the basis that the farmer (who takes control) works the land and pays one third of the yield to the owner of the land. This is obviously less favourable to the person who takes control of the land (most of the time a progressive farmer in the village).

All these transactions were found to be based on trust between the two parties (mainly due to the fact these are illegal). It was also observed that all these transactions were restricted to the village itself (i.e. these transactions were taken place only among villagers). Furthermore, in all of these transactions, documents had been exchanged between the two parties in such a way which was not illegal. For example, in the case of mortgaging and leasing of land, the documents exchanged between the two parties indicated that the land owner was given a money loan and in return the land would be to be worked by the lender for interest (as no interest is charged).

APPENDIX 5

Demonstration Case Studies

Table A5.1 An introduction to demonstration cases

| Case number | Activities | Success/failure |
|-------------|---|--|
| 09 | paddy farming, rice processing, rice milling, buying and selling paddy, paddy broker | successful farming family |
| 56 | paddy and OFC farming, boutique, short-eats and confectionery, making envelop, makeshift tea room, rice milling, women leader. | Successful farming family |
| 60 | Paddy farming, contracting paddy harvesting, hiring out tractor and bullock cart, buying and selling paddy, money lending and dairy cattle | successful farming family (partnership between a farming and a non-farming family) |
| 77 | paddy farming, rice processing, OFC, undertaking subcontract to repair irrigation channels, group activities | successful farming family |
| 82 | paddy farming, rice processing, money lending, buying and selling paddy, selling agrochemical and fertilizer, making bed covers, women leader | successful farming family |
| 93 | Paddy farming | Successful farming family |
| 95 | paddy farming, rice processing, hiring tractor, milk cattle | successful farming family |
| 96 | paddy farming, hiring tractors and buffaloes, money lending, OFC and peddler | successful farming family |
| 138 | Boutique keeping | Successful farming family (e.g. for negative adaptation) |
| 165 | Paddy farming, OFC, hiring tractor, rice processing, undertaking contract to repair irrigation channels, group activities. | Successful farming family |
| 250 | Paddy farming, rice processing and undertaking contracts to repair irrigation channels, group activities | Successful farming family |
| 254 | Paddy farming, OFC cultivation, fishing | Successful farming family |
| 119 | Paddy farming, milk cattle, curd making, goat keeping | successful non-farming family |
| 288 | paddy farming, spice packing, short-eats, bed covers | Successful non-farming family |
| 33 | paddy farming, OFC | subsequent failure |
| 253 | Paddy farming, selling labour | subsequent failure |
| 275 | paddy farming, goat keeping | subsequent failure |
| 92 | Paddy farming, hiring tractor, rice milling | failure and subsequent success |
| 271 | Paddy farming, selling vegetables in village fairs, boutique keeping, rice processing, | failure and subsequent success |

Successful Farming Families

CASE 9

Family background

This family consists of five members including husband, wife, and three daughters. All three daughters are still at school. Both the husband and wife contribute equally to decision making.

Resource status

-0.5 acre of highland

-1.6 ha paddy land of which 0.6 is on mortgage basis

-equipment and required infrastructure for rice processing

-rice mill and a permanent building for milling and selling rice (*note that they have deferred the decision to construct a better house. Researcher willingly lent (just before taking the harvest of 94/95 Maha season) RS 4000 to them. This money was used to put a cemented floor on two rooms which were to be used for storing paddy.*

-motor bike

-water pump

-two draught cattle (a buffalo and a stud bull)

Paddy cultivation

Paddy cultivation of this family was the major input source for rice processing activity. Land preparation was done with the help of two owned draught cattle (buffalo and a bull) which they did not hire out as an income generating activity. This farmer's explanation for this "bull buffalo" combinations is that, by doing so the efficiency of land preparation activities could be increased due to the increased resultant force caused as a result of these two animals tendency to move away from each other (technological innovation). Most of the work in the field was done by husband and wife (extremely hard working) and sometimes labour was hired in for specific purposes such as harvesting which had to be done within time constraints.

It was interesting to notice that fanning and winnowing of paddy (post harvest preparation activities adopted to separate full grains from empty grains) was not carried out by this family in the field by using a tractor(which was the general case in the village). Instead paddy was first transported to house with empty grains, and then the "soaking process" of rice processing was used to separate empty grains. Furthermore, the separated empty grains then were used as cattle feed. This strategy on one hand helped them to save time and money which otherwise should have been spent for post harvest preparation activities in the field and on the other hand saved time which should be spent for cutting grass to feed cattle. Adapting this strategy has been further facilitated by his diversification into the rice processing business, which required soaking of paddy before being parboiled. In short this had been adopted by this family both as a time saving and a cost reduction strategy.

Rice processing

Both parboiled and raw rice were processed (this is the only family in the village which offered both parboiled and raw rice). They earned a reputation for better quality rice in the area (not only in the village but also in neighbouring villages). As a result, they have been able to capture a niche market (other than the villagers) for their produce viz.

- (a) workers (both officials and other workers) at the “ Ellewawa Mahaveli Block Office” (about 200 families);
- (b) teachers of the two primary schools in the village.

All the above customers as well as villagers came to buy rice from their home (which also eliminated the need for transportation).

Most of the rice processing activities, during the peak seasons, were done at night. This had been adopted by this family in order to allocate day time for paddy cultivation activities. Furthermore, during the peak seasons, selling of rice was not carried out before noon as both husband and wife had to allocate their time and energy for paddy cultivation activities. Therefore, rice selling activities during this period was carried out by their children after school (time management coupled with division of labour).

As already has been mentioned above, the major input for rice processing activity was coming from their own paddy land. However, in the case where the keeping quality of paddy became poor, the entire harvest was sold and better quality paddy was purchased from fellow villagers during the peak harvesting period. Milling of parboiled paddy was done by their own rice mill. By-products of the rice processing and milling (rice bran and charcoal) were also sold to people who come to buy them in the premises. As far as the raw rice was concerned, rice milling could not be done by his own machine (as the huller of this machine is made of steel, it gave a higher percentage of broken raw rice). In this case, he had been using a rubber huller belonging to a neighbouring villager. His own motor bicycle was used as the mode of transportation.

Rice milling

This activity is catered for milling paddy of the fellow villagers. Like the rice processing , in peak seasons, this was also carried out during the night.

Buying and selling paddy

Bought in bulk during the harvesting season and sold to a few known traders coming from outside areas at a small margin. Furthermore, this farmer sometimes acted as a broker between villagers and traders (whom he had established contacts with) on a commission (obtained from traders).

Social activities

This family had been involved in teaching traditional dancing to children in the village (through “*Samagi cultural society*”). This activity was carried out by both husband and wife during the night simultaneously with other activities.

In addition to land preparation activities, the stud bull is used for inseminating the cows belonging to villagers (free of charge as a social service).

Other observations

This was the only family found in the village with a business objective as the major objective in life (note that the main objective of the majority of farmers was to educate their children), which was to expand the rice processing business to offer different rice varieties to their customers (which they think will be helpful in attracting more customers). Their immediate objective was to purchase a rice mill with a rubber huller, for which they have been saving money for three years. According to this farmer, obtaining a bank loan is not possible (for purchasing a rice mill), as he does not have the necessary contact to use as guarantors (please compare this with case no 56).

CASE 56

Family background

There are four members in this family. Husband, wife, a son and a daughter. Both the son and daughter have finished schooling (therefore an extra source of family labour). Most of the decisions in this family are taken by the wife in consultation with other family members. She is an active leader in the village too. Currently she is the president of the “*Gomathi Women’s Farming Society*”, a leading women’s society which has won the presidential award for the best women’s society in the country). The husband plays a passive (but supportive) role in both the family and business decision making.

Resource status

- 1.5 acre of up land (0.5 acre homestead, 0.5 acre commercial land and 0.5 acre land in the women’s farm)
- 1 ha of paddy land
- rice mill (not yet installed)
- two permanent buildings (other than the house) for the boutique and rice mill (yet to be installed)
- temporary building in the village Sunday fair (for the make shift tea stall)
- push bicycle

Paddy cultivation

As far as the paddy cultivation of the family, the entire land has been allocated for seed paddy production under the buy-back agreement with the Co-op shop (please refer to Case 250). In this context only short aged varieties are cultivated (which take only 3 to 3.5 months to get the harvest). This has been adopted as a strategy of efficiently allocating family labour among the other major income generating activities. Furthermore, except for application of fertilizer and agrochemical (in order to prevent pilfering) and harvesting (in order to maintain the quality parameters), all the other paddy cultivation activities are done through contractors. This is due to their understanding that “opportunity cost of the time” in paddy cultivation is very high. Harvesting of paddy is carried out by means of exchanged labourers. This exchange labour activity is organized by the wife from among a small group of needy neighbours. Paddy for home consumption is purchased from needy fellow villagers in small amounts. Furthermore the responsibility of paddy cultivation has been solely delegated to the husband.

In the case where seed paddy is rejected by the Co-op due to the family’s inability to meet the required quality parameters, the entire produce is sold to a known trader (a contact established by the husband) from a distant area at a relatively higher price (spotting geographical market windows).

Other Permanent Crops

Banana and lime have been cultivated in the homestead. The major rationale behind this activity is to obtain a continuous and stable income throughout the year (i.e. to spread the income throughout the year).

Other Field Crops

0.5 acre (in the *Gomathi Women's* farm) of chili and onion are grown by this family in January so that a part of the produce can be sold at a higher price (spotting market windows). The rest of the produce are sun-dried and stored and sold in their boutique (i.e. spotting time windows coupled with direct marketing).

Confectioneries and postal envelops

The husband had worked as a helper in a bakery before being settled in the village. As a result he possesses both the knowledge as well as the skills to make various types of confectioneries and short-eats. A share of these items (as well postal envelopes made by the daughter) are sold in their own boutique. The rest are sold to the other boutiques in the village and also in neighbouring villages. These items are transported by the husband in a push bicycle. These activities are usually carried out in off-peak seasons.

Makeshift tea stall

This is carried out in the village Sunday fair. The stall is operated by the wife and the food items for sale are prepared by the husband with the help of the daughter. This activity is mainly catered for (a fixed number of) vendors, who come from outside areas, to sell goods in the fair as well as for the people who come from neighbouring villages to buy goods in the fair.

Boutique

The responsibility of operating the boutique has solely been delegated to the son. As far as this activity, most of the transactions are carried out on credit basis with a limited number of credit worthy customers. This boutique also operates a barter system in which needy villagers can exchange paddy for other consumable items. This has been adopted both in order to reduce the risk of bad debts and also to obtain paddy for home consumption (as they do not cultivate paddy for their home consumption). Furthermore, it was observed towards the end of the field study that the product range offered by this boutique was extended to bicycle spare parts as the villagers have to travel to near town for this purpose. Here the spare parts are purchased from a wholesaler (through husband's contacts) on credit.

Rice mill

This is the only rubber huller in the village. The initial plan (as was indicated to the researcher during the initial stages of the field study) of this family was to purchase a rice mill from a bank loan. However, they did not have to obtain a bank loan as they were fortunate enough to obtain a rice mill from an adjoining villager who closed down his rice mill. This villager is a friend of the husband. This friendship had been established through the confectionery business. This transaction took place based on the understanding that this family would pay for the mill only if the business became a success (otherwise the mill was to be returned to the owner).

CASE 60

Family and historical background

Both male and female partners of this family settled in the village as two separate families. The male partner has been settled as a member of a farming family but the female partner as one of a non-farming family. According to them and to fellow villagers, both of their first marriage was unsuccessful. The male partner's first wife has committed suicide while the female partner has been divorced. Even though they are not legally married, they have been living together as a one family unit since 1986. Living together is quite uncommon, and usually unacceptable in Sri Lanka, even in the urban context. However, they are doing this for good reasons, because under the prevailing legal context a single family can have only one homestead and therefore if they get married one of them have to hand their homestead allotment back. Consequently they have chosen to be unmarried as a strategy of keeping both the homestead allotments. This appears to be an example of the flexibility of social values and norms when confronted with economic necessities.

The family consist of six members including four children. The eldest is a son of 17 and he is from the male partner's first marriage. The next is a daughter and she is from the female partner's first marriage. The remaining two are daughters and both of them are the result of their current living together. All three daughters are at school. The female partner dominates in decision making.

Resource status of the family

- .1 acre of high land
- 3.4 ha of paddy land (0.2 ha is leased and 2.2 ha is mortgaged)
- two-wheel tractor
- four draught animals

They own a house with three rooms. The house is made of mud walls with a tile roof. Walls are not yet plastered. The floor is not cemented either. Apart from this, they possess another permanent building which is being used for paddy buying and storage activities and is expected to be used for installing a rice mill in the future. Interestingly this building is made of brick walls (desirable to block off rat tunnels). This demonstrates that a higher value is being placed on their economic activities as opposed to their personal comfort (deferred gratification).

Paddy cultivation activities

Paddy is grown by the family in both the two major seasons. In this context, the total low land extent (i.e. 18 bushels) is allocated for paddy in the Maha season. However, in the Yala season, apart from paddy, a small block (about .5 acre) of low land is allocated for other field crop varieties such as chillie, onion and gherkin.

Method of paddy production

Land preparation for paddy cultivation by this family (like a few other minority families in the village) is started about two weeks before the majority of the farmers in the area. Firstly the entire extent of 18 bushels is ploughed. The first ploughing is done by their own cattle as a means of reducing the cost of production . Then the land is puddled by

their own tractor. Even though they have got enough cattle to puddle their lands, they do not use them as it is time consuming. However, final leveling is done by using their own cattle as they hire out their tractor to fellow villagers. Cultivation is done in a staggered manner in which second and third land preparation activities (i.e. puddling and leveling) and planting of paddy is completed in blocks of one hectare or less. Usually a minimum of 5 days is kept between consecutive blocks (their records reveal that in the current season, the first block of land was cultivated on 12th November '94 which is three days before the official deadline for long age varieties, and the final block of land was cultivated on 10th December which is five days before the official deadline for short age varieties-see *long age versus short age varieties below*). Staggered cultivation is practised mainly in order to effectively use the family labour both at the land preparation and harvesting stages, in which they can finish activities in one land and move on to the next block and so on, without hiring labour. This in fact, prevents an outflow of monetary resources from the family unit. At the same time, this is also a way of overcoming lack of hired labour during the peak demands periods.

When it comes to planting, the method "seed broadcasting" is practised as opposed to the transplanting of seedlings. It is a technically accepted fact that transplanting of paddy generates a relatively higher yield than that of in broadcasting. However, transplanting demands a higher number of labour days and thus has to incur a higher cost too. At the same time, as has already been discussed, obtaining hired labour during the peak demand periods is fraught with difficulties. According to the available information, it costs about RS 1700 for transplanting a hectare of paddy land which is equivalent to 17 hired labour days at the prevailing rates. Since they have chosen the method "broadcasting", they don't have to spend this amount as both the male partner and female partner are capable and willing to do this. Therefore in the above context "relatively low yield with low cost" has been chosen as opposed to "relatively high yield with a higher cost". Furthermore according to them, broadcasting of seeds can be taken as an effective weed control method and thus reduces the cost of weed controlling as well. Savings from the above activities are contributed towards applying the recommended amounts of fertilizer which is of crucial importance in the case of cultivated High Yielding Varieties.

Long age versus short age varieties

Depending on the time period required from planting to the ripening of panicles, paddy can be categorized in to two broad groups of varieties i.e. long age and short age varieties. Long age varieties normally take about 4 to 4.5 months whereas for short age varieties it is about 3 to 3.5 months. It is generally accepted among the villagers that long aged varieties give a relatively higher yield. In this context, the first block of their land is cultivated with a long age variety at the very beginning of the season. Consequently, short aged varieties are cultivated in consecutive blocks of lands. This particular strategy is adopted in order to prevent crop losses towards the end of the season due to rain fall and animal damages. Furthermore, the cultivation of both short age and long age varieties allows them to offer different seed paddy varieties to the fellow villagers and thus it serves as a means of attracting and keeping customers as well. On the other hand, some of the fields with short age varieties can be harvested a bit earlier than the peak harvesting time and thus can be sold at a relatively higher price too. However, as a result of this, they have to get a part of their crop harvested by

contractors. This is mainly because part of their crop tends to ripen together (long age variety and some blocks of short age varieties). As will be discussed later, this likely resource outflow has been minimized by the family by organizing a group of paddy contractors in the village.

High value varieties

In the Yala season an up market variety called "Samba" is grown by them. The price for this particular variety is normally high at the harvesting time. This is due to the higher demand created for this variety by the Christmas and Muslim festivals. However, the generally accepted opinion among the majority of farmers in the village was that, this particular variety tends to produce more empty panicles in the yala season. As a result, the majority avoid cultivating this variety. In this context, by selecting this particular variety, this family, like a few others in the village, take a considerable risk as well.

Contracting of paddy harvesting

They usually plan and finish most of their own cultivation and harvesting activities before the majority of the fellow villagers. This is mainly done in terms of timing the cultivation activities in their own lands. As a result they can hire out their labour after finishing the activities in their lands. Usually the male partner does the hiring of the tractor. In the meantime, the female partner, son and other three "non-farming" settlers get together and take contracts to harvest fellow villagers' paddy lands. The usual charge is RS 1600 per acre. According to them, 10 labour days are required to complete harvesting of an hectare. This contracting of paddy harvesting has been adopted as a strategy of preventing the outflow of money from the family unit as well. For example in a situation where two fields or more ripen simultaneously, and the male partner is unable to get involved in harvesting activities of their own fields due to other commitments such as hiring out tractor etc.(where opportunity cost is very high), the female partner along with the above group act as a contractor to the male partner. By doing so 2/5th of the cost of harvesting is retained within the family.

Buying and selling paddy

A portion of their produce is sold just after harvesting in order to recover the incurred cost. The rest is stored for selling later at a higher price and/or to sell when a need arises. Produce is usually sold to outside buyers who have been known to them for a long period of time. They usually select the collectors who are coming from distant regions (as opposed to collectors from the same region) as their prices are relatively high. Since these established contacts have existed for a long period, they are also capable of obtaining a relatively higher price than the prevailing market price. Furthermore, they are involved in collecting paddy from the fellow villagers at the peak harvesting time and re-sell this paddy to collectors simultaneously at a very low profit. This collecting and re-selling of paddy on the other hand helps them to create extra bargaining power for dealing with the outside collectors as well.

Hiring out the tractor

The rational behind purchasing the tractor is to reduce outflow of money from the family unit. Otherwise, according to their records, about RS 6000 to 7000 has to be spent on hiring in tractors in a given season. Now they can save a large proportion of that and can earn an extra income as well. The installment to be paid is earned by hiring

out the tractor. Their records reveal that a sum of RS 45,000 has been earned in the previous and the current season. Initially a driver had been employed by them on 20% commission as nobody in the family knew how to operate it. Now he and his son have acquired the skills to operate it from the hired driver. However, they still keep the driver on standby in case they have to employ their labour in other activities. Hiring out the tractor for ploughing, transporting and winnowing is mostly done on credit. This service is on offer for a selected group of credit worthy villagers only.

Other Field Crops

The homestead cultivation is mainly for home consumption purposes. The main aim of this is to prevent outflow of money from the family unit. However, in the case of surplus production, the surplus is sold to fellow villagers and for vendors who normally come and buy at their home. In the Yala season, a limited extent of the paddy land is allocated for chilies, big onions and gherkins. Gherkin is cultivated by the family as an out-grower for a subsidiary of a leading exporting company in the country. This is done in a limited scale due to its intensive labour requirement. Since almost all the input are provided by the company they do not have to worry about input costs except for labour.

Animal farming

As has already been mentioned, they own 4 bulls and one cow. The cow has been given to a fellow villager on a tenant basis in which the tenant feeds and gets the milk with the agreement that every other calf should be given to them. This is practised mainly due to lack of time for looking after the cow as a result of their other farming/business commitments. Bulls are used to plough their paddy lands and also for transportation purposes (i.e. bullock cart). In fact the major rationale behind their cattle farming activity is to obtain draft animals for the above purposes.

Bullock cart as a means of transportation

Used to transport paddy and fire wood for their usage and for fellow villagers. This transportation of fire wood is done mainly for the villagers who are involved in rice processing activities on request. However, this activity is carried out only in off seasons where demand for labour is relatively low.

Group finance

Apart from all the above activities, the female partner is a leader and the treasurer of a popular group finance activity (“*Keta Seettu*”) in the village. General activities of this kind is similar to that of “*Roscas*” (Rotating savings and credit associations-see Ghate et al, 1992: 39-42). However, the activities of this group are restricted to a limited number of credit worthy members whom she has found during her informal lending carrier. A sum of RS 18,980 has been earned in the previous year as the interest for lending money by this organization. The motivation behind this function is saving, mutual help and socializing as well as borrowing when the necessity arises. Furthermore, this activity demonstrated her leadership qualities as well.

Net working in the sphere of credit and hiring out the tractor

Lending money to fellow villagers is a high risk activity. This is because repayment depends upon the crop earnings of the borrower at the end of a given season. Therefore, in general, the default rate tend to be high. However, this lender like the few other

lenders in the village, has been able to minimize the risk by having her own group of credit worthy customers. However, in the case of new customers, she shares information regarding the credit worthiness of such people with another dominant female lender in the village. Furthermore, in situations where one lender is unable to lend (due to shortage of money and so on) they tend to share customers too. In similar circumstances, this exchange of customers is done by the male partner when hiring out the tractor as well

CASE 77

Family background

This family consists of six members. Husband, wife a son and three daughters. All the four children are attending school. Husband provides leadership to three societies in the village as a treasure. Decisions are made jointly by husband and wife.

Resource status

-0.5 acre of highland
-3ha of paddy land of which 2 ha is on 1/3rd basis
-equipment and other necessary facilities for rice processing.

Paddy cultivation

Land preparation for paddy cultivation is done by own buffaloes. Apart from these, buffaloes and labour are exchanged between this family and another two farming families in the villages (please refer to cases 165 and 250). By doing so, all three families are able to adhere to the time constraints. Like other successful families, paddy cultivation activities are carried out in blocks of one hectares in order to allocate time and family labour effectively. Usually a two days gap is kept between two consecutive blocks. Furthermore, this family has employed two permanent migrant labourers as a means of overcoming the shortage of labour during the peak seasons. These two laboures have been provided 0.2 ha of paddy lands free of charge. As a result, this family has been able to use two motivated labourers during the peak seasons. At the same time this has been adopted as a strategy to obtain free labour for water management and other cultural practices during the off peak seasons so that the time could be used for his main other business activity of subcontracting the maintenance of irrigation channels.

This farming family also produce seed paddy under the buy-back agreement with the Co-op society (one hectare). The rest of the produce is sold to a known trader just after harvesting and money is obtained at a later stage at a higher price.

Permanent crops

About a half acre of banana has been grown in their own paddy field. This has facilitated them getting a year round stable income source. Income from this activity has mainly been allocated for day-to-day home consumption purposes of the family (overcoming the seasonality of income which also facilitates their main income to be saved and reinvested).

Other Field Crops

Onion is cultivated during Yala season in such a way to obtain harvest at the end of August and sold at a relatively higher price (market window based on time)

Rice Processing

This is done as a group activity (please refer to cases 95 and 250).

Undertaking sub contracts to repair irrigation channels in neighboring villages

Sub contracts are undertaken by this farmer together with two other farmers (case no 165 and 250) for repairing the irrigation channels, outside the village.

This activity is carried out during off peak seasons. Usually maintaining of irrigation channels are carried out by Distributory Canal Farmer Organizations (DFO-refer to Appendix A3.1.6) in respective villages. Therefore, the first preference in assigning these contracts is given to DFO's in each village. However, the opportunity for this activity is created for outside entrepreneurs as a result of the malfunctioning (due to poor leadership) of the respective farmer organizations.

These three farmers have been able to capitalize this opportunity as they have established contacts (as they provide leadership to one of the farmer organizations in the village) with relevant Mahaveli officials. Furthermore, it is obvious that these activities have to be carried out in a hostile environment (as outsiders to the village are carrying out certain activities which otherwise would have been carried out by the villagers). They have been able to overcome this potential hostility by employing labour from respective villages. This clearly demonstrates their awareness of the relevant social aspects in achieving the activity success. Furthermore labourers for this activity are employed on the agreement that they will be paid at a later date upon the receipt of payments from MASL. This has been possible as there is abundant labour during off peak seasons.

CASE 82

Family background

Family consist of husband, wife and three young children who are at school. The husband does not participate in any of the income generating activities of the family, but plays a supportive role. All business decisions are made by wife sometimes in consultation with her father. She is an active women leader in the village too.

Resource status

- rice processing equipment
- push bicycle
- a permanent building for buying and selling paddy (expected to be used for seasonal selling of agrochemical and fertilizer)
- 0.5 acre of high land
- 2 ha of paddy land (1 ha mortgaged)

Paddy cultivation

Paddy cultivation by this female entrepreneur is done in order to obtain the major input for her main core activity which is rice processing. As far as paddy cultivation activities, except for the application of fertilizer and agrochemical (pesticide & herbicide), all the other activities are done through contractors. This approach is adopted due to the constraints and drawbacks of the other two alternatives. Where one is using hired labour, which requires supervising them by the hirer to ensure that they work in the expected manner and not pretend to work. In her case, she has elected not to choose the hiring of labour as allocating supervision time is a direct opportunity cost at the expense of her engagement required for rice processing activities. While the only other alternative of using family labour is not an option to her as she has no other family members who are able to participate directly or on a supervisory level in paddy cultivation. The main reason why she has chosen to apply agrochemical by herself is because if she entrusts that activity to contractors and if either the agrochemical is not properly applied and/or it is pilfered it would cost her by way of heavy reduction of the anticipated yield or in the extreme case of loss of the entire harvest. Paddy is sold to outside buyers only in situations where the keeping quality of paddy has become unexpectedly poor.

Rice Processing

She has decided upon selling her own harvest in processed rice form rather than as paddy as it is a value adding process in which she is able to generate an extra income over and above if it was sold as raw paddy. The major input for this activity comes from her own paddy cultivation. Furthermore paddy was also bought in small amounts from the villagers throughout off peak seasons. Paddy is parboiled, sun-dried and stored, during non-rainy periods of the year. This stored paddy is then milled in a rice mill in the village in manageable quantities (about 240 kg/day). Part of the rice is sold to needy villagers on credit during the off-peak seasons and the rest is sold to a number of known traders in nearby towns and to boutiques owners in adjoining villages on demand. Distribution of paddy is done on her own push bicycle.

Money Lending

She has established close relationships with three banks in the area. She obtains seasonal loans from these banks at an interest rate of about 20% APR. Secured on this credit line, on an informal basis she on her own lends money to needy villagers on very high varying interest rates ranging between 10 to 20% per month. She decides on the lending rate to each customer depending on her personal perception of the creditworthiness of the customer. The rate of borrowing is kept confidential by borrowers themselves for if they disclose this information that would result in they themselves having to borrow at a higher interest rate. This self-deterring mechanism amongst her borrowers allows her to operate varied lending rates, which is an interesting phenomenon. She is not interested in mass lending as she is concerned about over exposing herself to high lending risk and hence these transactions are done with a limited number of villagers whom she has found to be creditworthy customers during her lending career. When it comes to male borrowers, she always attempts to do the transaction through their wives as a means of reducing the default rate. She also maintains a close relationship with another female lender (case 60) in the village. Both of them share the information on creditworthiness of the villagers and sometimes share customers when need arises.

Over several years she has been borrowing from these banks in a very business like manner which has worked to her advantage by the banks increasing her credit limits several fold due to her organized nature of paying back the sum borrowed with the due interest in due time. Whereas the majority who started borrowing along with her from the same banks roughly at the same time as she started has either completely or partially lost their credit lines with the banks due to their own lack of understanding that what is borrowed has to be paid back when it is due with due interest as if not the lender will never lend to that party again or their disinterest or inability to pay back.

New developments

Buying and reselling paddy

This activity started towards the end (i.e. the third phase) of 94/95 Maha season (the field research was carried out during this time) as a partnership with her brother. Paddy was bought in bulk during the harvesting season from the fellow villagers and sold to outside traders at a small margin. In this partnership, the brother provided buyers (through established contacts) whereas the sister provided working capital (from a bank loan) for buying paddy along with customers from the village. She has started this ancillary line of activity also as a means to reducing the risk of defaulters. In this context, she had provided credit facilities to her customers (at the beginning of 94/95 Maha season) on the agreement that the borrower could settle the sum borrowed with due interest by way of paddy (barter) instead of money. For this purpose a permanent building was constructed when the field work was underway.

Selling Agrochemical and fertilizer

Her next new activity was start selling fertilizer and agrochemical for farmers during the first phase of paddy cultivation. This was started at the beginning of '95 Yala season. The building which was being used for collecting paddy was used for this purpose too. In this case, she sold most of her regular customers these agrochemical and fertilizer in advance on credit (rather than giving them high interest credit) with

the agreement that they should sell their produce to her in return (with due interest). According to her this is less riskier than giving them high interest credit and also earn an extra income from selling. Furthermore by adopting such a strategy, she says that she can keep the building occupied (seasonal use of resources). She is expecting to carry out both the buying paddy and the selling of agrochemical and fertilizer seasonally. Her major expectation was to diversify from money lending business to these latter two activities, thus by controlling the growth of money lending business. This is in order to reduce the potential risk of overexposing herself into high risk of defaults.

Other observations

One of her major expectations is to buy a rice mill so that she could increase the profit from the rice processing business. Though she has capabilities to buy a fuel operated mill, she has deferred this decision till the village get electricity.(According to her, she is physically not capable of operating a fuel operated rice mill).

CASE 93

Family background:

This family consists of husband, wife and a son who is still at school. Wife is a school teacher. Business decisions were made by the husband after discussion made with wife. Prior to settling down in the village, this farmer had worked in the Government Forest Department. As a result of this he had been able to bring about RS 70,000 (from the employees provident fund) to the village (by the time of settling down)

Resource status

- 0.5 acre of high land
- 5 ha of paddy land (of which 3 ha are leased and another ha is on 1/3 basis)
- two wheel tractor
- 10 buffaloes

Paddy cultivation

This is the only income generating activity adopted by this family. Initial preparation activities of the entire land extent was done by their own buffaloes. These buffaloes were looked after and hired out by a fellow needy villager. Income from hiring out the buffaloes was not taken by this family. Instead, the person who looked after the buffaloes ploughed this family's land free of charge.

The other stages of the land preparation activities were carried out by their own tractor. Furthermore this family employed three permanent migrant labourers. This strategy had been adopted in order to overcome the labour shortages during the peak seasons (please refer to case 77).

Fertilizer and other required agrochemical were purchased in bulk at a discount rate from a known agent.

When it came to planting of paddy, seed broadcasting was adopted (as opposed to transplanting of seedlings which was costlier and more time consuming). In this context 2 ha of land was cultivated with long aged varieties (i.e. 4 to 4.5 months old varieties) and the rest was cultivated with short aged varieties. In order to adhere to these time constraints (please refer to case 60)

Harvesting of the entire extent was done by contractors. This was practiced in order to avoid crop damages by rain fall during the harvesting stage.

Marketing of paddy

Produce was sold to a known large scale rice mill owner and money was obtained at a later stage at a higher price. This was done entirely based on relationship of trust established over a long period of time. By doing so he has been able to overcome lack of storage facilities (i.e. to store and sell later at a higher price).

Last season , he had been able to use the quotas of some of the fellow villagers to sell his paddy to the Co-op at the Guaranteed price rate (GPS). Those villagers had not been able to sell their paddy to Co-op due to poor quality caused by the rainfall during the harvesting stage (as a result of their inability to adhere to time constraints in section 5.2.1). This demonstrates this farmer's entrepreneurial talent in spotting opportunities and capitalizing them.

CASE 95

Family background

This family is composed of four members. Husband (45 years), Wife (40), a daughter (9) and a son (7). Both the daughter and son are attending school. Husband takes the decision after discussion made with wife.

Resource status

- two wheel tractor
- 0.5 acre of upland
- 1 ha own paddy land
- 0.8 ha mortgaged paddy land
- 10 milk cattle

Paddy cultivation

As in the majority of the cases, paddy cultivation is the main-core income generating activity of this family too. Apart from the one ha of their own paddy land, this family has mortgaged another 0.8 ha from a needy villager. They have been able to reduce the production cost by having their own tractor. The tractor is hired out as an extra income generating activity only after completing their own land preparation activities. However, when there is a request by a farmer in an adjoining paddy field, the tractor is hired out (even before the completion of the land preparation) as it is possible in such a case to carry out both the supervision of paddy cultivation in their own land and hiring out the tractor, simultaneously. This strategy is adopted by the family in order to manage the time efficiently which in turn facilitated their adhering to the various time constraints discussed in Chapter Five.

Contract growing of seed paddy

This family has been able to reduce market uncertainty for their paddy by being a seed paddy out-grower to the Co-operative ohop (one ha). Under this buy-back contract, the family is assured with a price which is considerably higher (RS 9) than that of the government's (inactive) guaranteed price scheme and also the average market price. Furthermore, under this agreement the farmer is provided with all the required agrochemical and fertilizer on credit, which also reduces the working capital requirements at the initial stages of the seasons. This also facilitate the family to store and sell the rest of the paddy at a higher price. However, this activity requires much labour as well as greater care, than that of usual paddy cultivation activities. This is because that this activity demands extra care both at the field and post-harvest stages to meet the required quality parameters, of which the majority of the villagers are found to be unwilling to adhere to.

Rice processing

This is done as a group activity along with another four farming families in the village (i.e. cases 77, 83, 165, 250). Rice is processed individually by these five families and sold jointly to known traders in near towns during the off-peak seasons. This (i.e. group activity) is adopted as a strategy to (a)reduce transport

cost (b) manage the time effectively by dividing labour and delegating responsibility within the group and (c) gain an extra bargaining power before buyers. Input (i.e. paddy) for this activity comes mainly from their own produce. Additionally paddy is bought from the needy villagers who sell in little amounts in order to meet their day to day consumption needs.

Other Field Crops

The only OFC variety cultivated by this family (for external market) is onion. A half an acre of onion is cultivated in the Yala season. The harvest is sold to a known buyer in a distant town (i.e. Dambulla). Here the price information is obtained from his father who lives in the same area. Though the family knows that income from this activity can be increased by increasing the land extent, they do not implement it as they are aware that the family can not meet the extra time requirements. Additionally, other OFC varieties cultivated for home consumption purposes drastically reduces the monetary out-flow from the family.

Milk Production

This family started this activity with three cows. Currently they posses ten milk cattle. Milk is sold to the milk collecting centre in the village. Income from this activity is deposited in the Rural Development Bank with the expectation of obtaining a bank loan to purchase a few more milk cattle of an improved breed. Here the cattle management activities has been delegated to the farmer's wife (i.e. division of labour within the family).

CASE 96

Family and general background

Family consists of five members including three children. Among the children, the eldest is a daughter of 9 years and next are two sons of 8 and 7 respectively. All the children are still attending school. The major rationale behind this marriage (according to the male head of household) was to obtain a piece of land (as it is a legal requirement that the applicant of a land in AMP should be a married person). Decisions (both in terms of family and business matters) are made entirely by the husband. This farmer is an example of an extremely hard worker in the village.

His attitude towards agricultural extension services is entirely negative. He is a greater believer in his own experience. This farmer also learns by (a) observing other farmers activities and (b) experimenting in small scales.

Resource Status

- 5 hectare paddy land (including four mortgaged lands)
- 2 two-wheel tractors
- push bicycle
- 5 pairs of draught cattle

Gradual development of paddy farming activities

This farmer commenced his paddy cultivation activities only on a limited land extent (0.25 hectare-as it was the only feasible option within the given resource limitations). In this setting, a 0.5 ha of (unprepared) paddy land was handed over to one of the non-farming families in the village for initial land preparation (i.e. converting the highland to arable paddy land, which demanded a higher number of labour days-please refer to case 33) and subsequent cultivation for a period of four consecutive seasons.

From the first season onwards, he has been cultivating cassava, maize (i.e. crops with a relatively low water requirement) in his home garden. The harvest of these crops is sold both within and outside the village (with the bicycle as the mode of transportation). Income from OFC has been reinvested to gradually increase the land extent under paddy cultivation. By the fifth season he was able to save enough money for hiring labour for paddy cultivation activities (given his lack of social contacts, hired labour is the only feasible option in the context of limited family labour).

Diversifying into money lending and mortgaging paddy lands

Subsequently, he started “money lending” for needy villagers. This was his first diversification into non farming areas, in which the savings from the farming (both OFC and paddy) were re-invested in providing high interest credits for villagers whom he hired as labourers for his paddy cultivation activities (as a means of reducing the risk of defaulters). This was followed by diversification into mortgaging paddy lands. This was adapted by this farmer in order to gain the advantages of economies of scale. Mortgaging of land was continued until he took control of four extra hectares.

A subsequent crop failure led this farmer to realize that the increase of the cultivated land extent (beyond a certain limit) may lead to disastrous situations, mainly due to impossibility of adhering to the various time constraints. This crop failure was occurred due to his inability to harvest part of his paddy lands within the imposed time restrictions (see figure 5.2). This was as a result of the shortage of hired labour.

This incident led him to hand over part of his (i.e. three hectares) mortgaged lands to some other fellow villagers on 1/3rd basis. This 1/3rd basis is relatively riskier than that of “fixed yield basis”, in which a fixed number of bushels of paddy is paid by the farmer to the land owner immaterial of the yield levels (refer to Appendix A4.3). The level of risk involved in 1/3rd basis is higher as there is a possibility for low yield levels. However, this level of risk was minimized by taking a decision to hand over these lands to some of the most entrepreneurial farmers in the villages (please compare this with that of case 33). This activity clearly demonstrates how well this entrepreneur has been able to coordinate misallocated land in the village towards extracting values in the given limited resource context.

Hiring out the tractor

One of his tractors has been handed over to his father, who lives in another part of System B. Here the responsibility of hiring out the tractor has solely been delegated to his father with the agreement that he receives 75 per cent of the profit. The other tractor is mainly used for his own paddy cultivation activities.

This second tractor is hired out only after finishing the cultivation activities of his own land. Furthermore, as in money lending, this activity has also been restricted to a limited number of his hired labourers (as this transaction is carried out based on credit). According to him, the income earned from hiring out this (second) tractor is enough to cover the cost of agrochemical including fertilizer. Draught cattle have been handed over to a needy friend (who belongs to a non-farming family) in an adjoining village who looks after and hires them out. Income from this activity was kept by the friend. In return, assistance of the friend was obtained for land preparation activities (please refer to case 93).

Planning in terms of reducing the cost of production

Paddy production activities are planned by this farmer prior to each season. This planning is mainly geared towards reducing the cost of production (i.e. how to produce to attain a minimum cost of production). In this context, a sum of money is allocated for each activity and every effort taken to stay within the allocated budget limits.

Strict measures to control home consumption

A budget for home consumption is allocated prior to each season (RS 12,000). Furthermore, every effort is taken by this farmer to save a part of the allocated money. In this context, this farmer has taken the responsibility of doing the shopping for his household requirements (as the wife has a tendency towards overspending). These strict measures (taken by this farmer to minimize the cost of living) are known to the majority of villagers.

Nature of paddy cultivation activities

Early planting and harvesting is adopted by this farmer too (as in the majority of entrepreneurial farmers in the village). This strategy has been adopted by this farmer mainly in order to (a)overcome the shortage of hired labour in peak seasons (b)adhere to the various time restrictions.

Both the short and long aged varieties (see case 60) are cultivated. The major rationale behind this strategy is to provide different seed paddy varieties for fellow villagers who buys seed paddy from him (about 50 bushels of seed paddy is sold to fellow villagers in every season). Furthermore, as in case 60, seed broadcasting is practised as opposed to transplanting of seedlings.

Paddy is stored and sold to collectors. He constantly keeps searching for higher prices as he does not have established contacts with any trader.

Other observations

(a)One of his major business objectives in life is to purchase a four wheel tractor (for which he had obtained a driving license in 94 Yala season). Consequently, he approached no 95 to discuss the possibility of purchasing a tractor as a joint venture (discussion were under way towards the end of the field study).

(b)The other major objective of this farmer is to construct a better house (which has been deferred to a later stage)

(c)The other main objective is to give a better education to his children (please note that this is found to be the main objective of the majority of the cases).

CASE 138

Family background

There are four member in the family including husband (55), wife (48), a son (20) and a daughter (16). Decisions in the family are taken by the husband (after having discussions with his wife).

Resource status

- 1 hectare paddy land
- 0.5 hectare homestead
- permanent building for operating the boutique (apart from the house)

Business activities

This case is an example of a paddy farmer who has given up paddy cultivation and diversified in to an unrelated area (boutique keeping).

Before settling down in the village this farmer had been a bus driver. Upon settling down in the village, he continued to work as a driver. Furthermore, paddy cultivation had also been carried out simultaneously by employing hired labourers (for almost all the activities). Paddy cultivation had been continued for five consecutive seasons without any success. This led him to hand over his paddy land to a fellow villager based on "*wee poronduwa*". Paddy obtained from this agreement (40 bushels) is used for home consumption purposes.

Consequently he diversified into boutique business. Goods (for selling in the boutique), are purchased from a wholesale dealer in a near town (some times on credit). He has been able to establish this contact as a result of his bus driving career. At the time of the field study, this boutique is one of the most successful one in the village with a stock of about RS 50,000 worth of goods.

CASE 165

Family and general background

There are seven members in the family including husband, wife and five children i.e. four sons and the youngest daughter. Eldest has finished schooling and helps parents in their farming activities. The other four children are still schooling. Decision making is done by the husband after discussing with wife and the eldest son (participatory). This farmer, like case no 250, is a very well respected individual in the village. Furthermore he also provides leadership to various societies in the village. For example, he is the president of the "*Gramodaya Mandalaya*", Distributory Canal Farmer Organization, and secretary of the *Parakum Village Development Society* and the *Samagi Farmers society*.

Historical Background

This is one of the four families which came to the village with a relatively large sum of money earned from previous employment. Furthermore, of those four families this is one of the two families which still maintains economic success (please refer to cases 93, 253 and 275 for other families).

This farmer had initially (before settling down in the village) worked as a labourer in the Government Irrigation Department. Subsequently joined a North American Construction Company (which was involved in the construction activities in System B of the Mahaveli Development Project) as a machine operator (stone crusher operator). He was then promoted to a post of foreman and finally to a supervisor in 1984

The family had settled down in the study village with a saving (from the above employment) of about RS 100,000. Upon settling down in the village he continued to work in the above North American Company. As a result of this commitment, in the first two seasons he had cultivated only one fifth (.5acre) of his paddy land. This was according to him, that the opportunity cost of working the entire paddy land was extremely high. During this time the rest of the paddy land had been given to a fellow villager (who belonged to a non farming family with out paddy lands) for initial preparation (i.e. conversion of the highland in to an arable paddy land) and subsequent cultivation for four seasons.

Upon the completion of working in the north American Company (that is about two years after settling down in the village), part of the savings had been invested on cultivating one acre of Chilli (which is a highly capital intensive crop). Earnings from this activity were invested on purchasing a two wheel tractor which was then hired out for land preparation activities of the fellow villagers. He was the first to buy a tractor in the village and also first to cultivate OFC (i.e. chillies in this case) also at a lager scale.

Resource status

- two hectare of paddy land (1 ha leased)
- 2.5 pairs of buffaloes
- two-wheel tractor
- paddy processing equipment
- motor bike

OFC cultivation

This farmer has been actively involved in educating and motivating fellow villagers to diversify into OFC cultivation (during the off-peak seasons). He rationalizes this attempt as follows:

- (a)when the number of OFC cultivators increases it is very easy to attract buyers due to the increased output.
- (b)when the amount of produce increases, buyers come and buy in the village itself which eliminate transportation cost.
- (c)the increased number of producers selling their produce in a co-operative manner brings about increased bargaining power to gain a better price from buyers (intermediaries).
- (d)when a group of farmers cultivate the same crop it is easy to get extension and support services.
- (e)cultivation of OFC gives an opportunity to maintain a better relationship with various Mahaveli officials (which is helpful for negotiating with them for various common activities)

Chilli

Chilli is cultivated only in Yala season in order to reduce crop damages caused by pest and diseases. This is crucial as chilli is a crop which is highly susceptible to diseases (refer to case 33). Produce is dried, stored and sold later at a higher price.

Gherkin

Gherkin is cultivated at a very small scale in Yala season as a buy back contract with a subsidiary of a leading export company in the country (refer to case 254, 60).

Paddy production

Labour and draught animals for this purposes are exchanged with no 250 and no 77 (please refer to 77 and 250). Two varieties of paddy were cultivated in both Yala and Maha seasons of which one is an up-market variety called "Samba" (please refer to case no 60). This high value variety was grown at a small scale (1 acre) as cultivation of this variety was a bit riskier due to the potential high percentage of empty panicles. Furthermore, this farmers records revealed that income from one acre of "Samba" was enough to cover the cost of paddy cultivation activities in the first and the second phases (refer to figure 5.7). Harvesting of paddy is done on a contract basis in order to stick to time constraints. Though the contracting is a little bit expensive relative to hired labour, harvesting could be done quicker by adopting this method. This method is also very convenient as there is a shortage of hired labour supply during the peak seasons.

Part of the paddy is sold to the Co-op (for which a certain quality has to be maintained -please refer to case 95) and to the paddy marketing board at the guaranteed price (this was possible as he had contacts with relevant parties). The cultivated up market variety is sold to a known rice mill owner in a near town. At the same time, part of the paddy is stored and sold later at a relatively higher price.

Seasonal paddy processing as a group activity

Please refer to cases 77, 83, 95 and 250.

Taking subcontracts to repair and maintain irrigation channels as a group activity

Please refer to case 77.

other Group activities

Please refer to case no 250.

CASE 250

Family and general background

Apart from husband and wife there are three sons and three daughters. All of them, except the youngest son, have completed schooling. The youngest is mentally handicapped. Husband takes decisions after discussion with the other family members. Family and exchange labour involvement are predominant in this family.

The male head of the household is one of the most respected individuals in the village. This farmer (along with Case 77 and 165) has founded some of the well functioning societies in the village. He also gives leadership to a considerable number of societies in the village. This farmer demonstrates leadership qualities and relevant skills in mobilizing and coordinating needy villagers towards achieving personal and common objectives (symbiotic relationships). He accepts that the experience he gathered from getting involved in various societal activities before coming to this village were of great help to him in becoming a political leader in this village.

His activities can be divided into two major types viz.

- (a)farming and related business activities which are of personal interests to him and
- (b)societal involvement which is directly geared towards the welfare of the fellow villagers (also with indirect significant advantages to his own development).

Resource status

- 2 hectare paddy land (one ha leased)
- paddy processing equipment
- buffaloes (2 pairs)
- milk cattle (1 pair)

Farming and Other business activities

Paddy Cultivation

Apart from their own land, this family cultivates another one hectare of paddy land which belongs to a fellow villager based on “*wee poronduwa*” where a fixed portion of the yield is paid to the owner. Their own land has been allocated for cultivating seed paddy to the Co-op on a buy-back contract (note that this activity was initially introduced to the village by this farmer, refer also to cases 56, 77, 95, 165). Furthermore, it should be noted that the initial arrangement for this buy-back agreement had been made by this farmer after obtaining the information from an office bearer of a farming society in an adjoining village. This buy-back contract works in two favourable ways. On one hand it reduces the working capital requirements to carry out initial cultivation activities as the Co-op supplies seed paddy, fertilizer and other agrochemical, and on the other hand this gives an assured market price for their produce (provided that the required quality parameters are fulfilled) which is above the average market price. His own land is worked by the family members (along with exchanged labour among case no 77 and 165) whereas the other land is worked based on an exchanged labour arrangement among the members of the Field Channel Society (this will be dealt with later). Cultivation of his own land is completed two weeks before the majority so that family labour can be

efficiently utilized in the exchange labour arrangement in order to carry out the cultivation activities of the other lands.

Exchanging draught cattle for land preparation activities:

Please refer to case no 77.

Paddy marketing

As has been mentioned above, seed paddy is sold to the Co-op at a higher market price (buy-back contract). Paddy from other land (after keeping for consumption and rice processing activities) is stored and sold to collators at a higher price.

Milk production

Milk obtained from cattle is sold to the collecting centre in the village (refer to case 119).

Taking subcontracts to repair and maintain irrigation channels

Please refer to case nos. 77 and 165.

Societal activities in general

His initial formal societal involvement at an official capacity was started when he became the secretary of a farming society in the village. This happened in the sixth year after his settling down in the village. By that time there was only one farming society for the entire village which according to him and most of the fellow villagers was very inefficient due to poor leadership. As a result, he and no 165 launched a campaign in the village to educate the fellow villagers about the need for an efficient farming society which would be very useful in negotiating with Mahaveli officials etc.

By that time they understood the inappropriateness of a single farming society for the entire village as it brought about management difficulties due to the large number of farmers (in a one society). Consequently they requested the Residential Project manager (RPM) to implement the concept of “Distributory Channel Farming Society” or “D Ela society”, in their village. This divided the villagers into three manageable groups. This farmer became the secretary of the society he belonged to. Cases 165 became the president. Since then, these two farmers along with no 77 (who became the treasurer of the farming society) have been involved in several formal societal activities and informal group entrepreneurial activities.

It is quite apparent that his career in formal societal activities has provided the background for informal group entrepreneurial activities(in obtaining a greater social awareness) which plays a significant role in mobilizing fellow villagers in achieving commercial objectives. He is also the president of the “*Suhada Maranadara Samithiy, Samagi farmers Society, Parakum Village Development Society* and the Field Channel Society (composed of 12 farmers).

Undertaking subcontracts to clean and repair irrigation channels in the village

This is the first group entrepreneurial activity organized by these three farmers (cases 77, 165, 250). This farm organization undertook a subcontract to clean and de-silt their distributory channel. This task was implemented through a “*shramadana*”

(in which a group of people work together without a money wage to achieve a common objective) by the fellow members. Earned money (profit) was deposited in the farmer organization's bank account. It is a requirement of all the members in a farming society to contribute a seasonal membership fee. Since they worked based on "sramadana" to earn a profit, these three office bearers took a decision to waive the membership fee. Furthermore each member farmer was allocated a share of this profit for which they could claim dividends. These measures were taken in order to motivate the fellow members in obtaining their participation for similar activities in the future.

In the second subcontract, they adopted a different method to motivate farmers i.e. members were divided into different groups and different parts of the channel were allocated to each group as sub contracts from which they also could earn a profit. This activity is carried out in off-peak seasons where farmers do not have much work to do (please refer to case 77).

Paddy processing as a group activity by *Parakum Village Development Society*

This was implemented by the above society in which he is the secretary and case 165 is the president. This society was formed based on the advice given by the Block office Marketing Officer.

The government provided RS 50,000 for starting this business activity. Provided money was equally divided among 10 farmers according to a point scheme (based on initial preparation for the business). This group also included no 250, 165 and 77. They accept that this is one of their greater business failures as they could not find the buyers for their produce. Though the marketing officer promised that he would help them in finding buyers, the only help he provided was a lorry (free of charge) to transport their produce to unknown buyers.

They learned from this experience that each business activity should be market oriented. Currently this activity is carried out in latter part of the "first phase" and through out the "second phase" of paddy cultivation activities where demand for rice is higher in local areas (please refer to case 95 for the justification of this group activity). Currently only five members do this. They sell the produce to boutique owners in adjoining town and villages (through established contacts). This is also one of the good examples in the village which demonstrates the inappropriateness of the top-down approach of the extension services.

"Samagi farmers' society"

This is an informal society consisting of 14 farmers. This was founded by this farmer along with cases 165 and 77. The main direct objective was to help some of the needy friends. The was by implementing a programme to save money (i.e. income from paddy) which could be reinvested in the first and third phases of the paddy cultivation where most of these farmers borrow money at higher interest rates, so that members (of this society) could overcome the unfavourable exploitation by middlemen.. These objectives were put forward to the potential members at the commencement. They were asked to contribute a membership fee of RS 2000 just after the harvesting of

their crops in that particular season. The society was initially started with 12 members and subsequently grew into a 14 member society.

From the initial fund collected from members (RS 24,0000), they bought paddy from the fellow villagers and re-sold to a known (to case165) intermediary at a profit of RS 19,000 (two seasons after the commencement of the society). This money was then utilized to purchase fertilizer from a known trader (in a nearby town) at a little discount and distributed among the members with the agreement that they should settle money at the end of the season.

The next major activity done by this informal society was to help a member to settle his mortgaged (i.e. take the control of the land back) land for RS 25,000. The society contributed RS 15,000 towards this settlement. This contribution was treated as a lease agreement with the owner (i.e. the member). This arrangement worked in the following ways:

- (a) owner was able to settle the land from the mortgage agreement (this would have been impossible without the help of the society)
- (b) the owner receives:
 - (i) a share of the profit at the end of each season and
 - (ii) the control of the land at the end of a period of six seasons, which situation was never possible under the initial mortgage agreement.

The members worked the land through a “*Sharamadana*” (in the subsequent season) and earned a profit of RS 32,000. This encouraged some other members also to lease out their lands to the society for RS 15,000 each hectare. The society then adopted (under the leadership of this farmer, cases 165 and 77) a different strategy, in which the control of leased land was given back to the owner (with fertilizer, agrochemical etc. on credit) so that he could work the land and pay back 50 bushels of paddy at the end of each season. This was due to the shortage of labour to cultivate these lands on “*shramadana* basis” (this is still the case).

The number of members who leased out their land to the society increased to seven. This growth in turn brought about management difficulties to the leadership (i.e. allocating time from their busy schedule to obtain 50 bushels of paddy from seven members, store and sell them). The society then adopted a strategy to delegate the responsibility of selling the above share (i.e. 50 bushels of paddy) to the owners themselves so that they could settle the money at the prevailing market price (rather than handing over paddy). In facilitating this process these members are provided with price information and contacts with buyers so that the unnecessary exploitation by traders could also be prevented. By the time of the field research, this amount was reduced up to 35 bushels per season.

Up to 94/95 Maha season, each member has been paid dividends of RS 1000. Furthermore each member was provided a cash loan of RS 4000. This amount was later written off in order to cushion a loss caused by unfavourable weather. A new membership could be obtained in this society by paying a membership fee of RS

12,000 (i.e. the total amount of savings divided by the current number of members) This is virtually an impossible task for a needy farmer. Therefore discussions were underway by the leaders to establish another informal society of 40 farmers to extend the benefits of similar kinds to fellow villages (towards the end of the field work).

Society for aiding the funeral arrangements

The above society has been extended to another branch called “*Samagi Maranadara Samithiya*”. This is to aid the funeral arrangements of the member families. For this, a separate membership fee of RS 300 is charged at the end of each season. In the case of a funeral of a member family, a payment of RS 3000 is paid to the particular member. At the same time the responsibility of organizing the funeral arrangements are also taken over by the society. This avoids members having to borrow money for these purposes.

Field Channel Society

It is a formal requirement that farmers in each field canal should be organized into Field Channel Society (see Appendix A3.1.6). Usually the main task of the FC society is to manage the water distribution activities within the field canal. This farmer has been able to coordinate all the other farmers in his field channel for other beneficial purposes.

This group consists of 12 farmers. Most of them are needy farmers. The main aim of organizing this group activity is to exchange labour and draught cattle among the members so that they could adhere to the time constraints imposed by the environment. This is mainly through overcoming the shortages of labour during the peak seasons. The other objective is to motivate fellow members to carry out timely field channel maintenance, which directly facilitates adapting to the various time constraints.

In 93/94 Maha season, this group under the guidance of this farmer started collecting a membership fee of RS 1000 per season. This money was then (in the third season) then utilized to purchase fertilizer and agrochemical at a discounted rate (this is possible as he and no 165 is involved in purchasing fertilizer and agrochemical for the above 14 member society as well). Purchased inputs were subsequently distributed among the members so that they could settle the cost at the end of the season. These inputs are purchased from a known trader who also transport them to the village (with zero cost of transportation). These activities reduce the possibilities of fellow members becoming indebted at the beginning of each season so that they could overcome the problem of being exploited by middlemen just after the harvesting.

CASE 254

Family background

This family consists of five members. Wife, husband, son and three daughters. Apart from the eldest daughter the other three children are still at school. All the business decisions are made in a participatory manner by husband and wife. This farmer is a popular leader among the younger generation in the village.

Resource status

- 0.5 acre of highland
- 1.4 ha of paddy land (0.4 ha is on mortgaged basis)
- fishing equipment
- 2 buffaloes
- motor bicycle

Paddy cultivation

Paddy cultivation by this family is done by employing family laborers. Labour exchange for other social activities (e.g. for transportation provided by the motor bicycle) are also adopted. Two own buffaloes are used for almost all the land preparation activities. Agrochemical and fertilizer are purchased from a known agent on credit. Upon harvesting, a small proportion is sold to a known person in order to recover the incurred cost, the rest is stored and sold to the same trader at a later stage at a higher price.

Other Field Crop varieties

Gherkin

This crop is grown on a buy-back agreement with a subsidiary of a leading export oriented company in the country. Required input such as seeds, fertilizer and agrochemical are provided by the company on credit with the agreement that the farmer sells the produce to the company. As this crop is highly labour intensive, cultivation practices are done in off-peak seasons (between December to March). A part of the paddy land is allocated for this purpose as the crop management activities in both the paddy and gherkin can be carried out simultaneously leading to efficient labour and time management.

Chilli

Cultivation activities are usually commenced in December so as to harvest the crop at a time window where the price for final produce is higher. This crop is sold to a villager who is a vendor (in the off-peak seasons).

Onion

This crop is also cultivated simultaneously with chili and gherkin and the produce is sold to a known trader in a distant town (i.e. geographical market window).

Fishing

This business is carried out by the farmer in off-peak seasons. Fishing is done in the Ellewawa tank during the night and sold (in the morning) to peddlers who come from various parts of the System B. Fishing in the tank is carried out in an organized manner according to the rules imposed by the Fisherman's Society in the village. This society was founded by this farmer mainly to prevent over exploitation of the fisheries resources and also to prevent outsiders coming and fishing in the lake. Currently this farmer is the secretary of this society.

Successful Non-farming Families

CASE 119

Family background

Family consists of five members, husband (55), wife (49), two sons (22 and 20) and a daughter (16) who is disabled. Decisions in the family are taken in a participatory manner.

Historical background

This family is one of the non-farming families in the village. Both husband and wife worked as wage labourers for initial two seasons. In the second season, they started looking after the milk cattle of a fellow villager based on the agreement, that milk is obtained and every other calf is given to the owner. Then they diversified into making and selling curd to both villagers and outsiders (by using a push bicycle as the mode of transportation). Saved money from both the above activities was re-invested on purchasing a pair of buffaloes.

Consequently the husband started hiring out these buffaloes for land preparation activities of the fellow villagers. In the meantime the wife continued to work as a hired labourer. Savings from the above activities was re-invested to start paddy cultivation in land obtained in an adjoining village based on “*wee poronduwa*”. Paddy cultivation in this land was carried out by employing family labourers (husband, wife and two sons). By this time the herd of buffaloes was grown to 12 (including later purchases) which led them to continue the curd making business. They then started supplying curd to village boutiques too.

Of the above 12 buffaloes, 10 were then sold for RS 22,000. Of this amount, RS 20,000 was re-invested to purchase a bullock cart and a pair of cattle. This purchase was made with the objective of hiring them out for transportation purposes. By this time the family was able to obtain a bank loan of RS 35,000, which was re-invested in purchasing four milk cattle of an improved breed. This loan was obtained under the guidance of Case numbers 165 and 250. The main rationale behind this purchase was to expand the curd making business (by this time this family were able to establish contacts with boutique owners in neighbouring villages).

His successful milk cattle keeping led him to be a role model for fellow villagers. This in fact led the “*Gomathi Kantha Samithiya*” to donate (with the help of Mahaveli officials) four milk cattle of an improved breed to four of its members (GN is one of them). This increased interest in milk cattle keeping among villagers led some of the other villagers also to follow the same activity which resulted in increased in supply. This development was taken by this farmer to persuaded the GN (who also owned a milking cow) to make an arrangement with the Milk Collectors’ Co-operative in Kaduruwela to initiate a milk collecting centre in the village (case 91-GN’s father).

In this arrangement, milk in the village is collected by Case no 91. The collected milk is re-collected daily by the Co-op. Payment for milk by the Co-op is made based on the fat content. This farmer capitalized this opportunity to mix cow milk with buffalo milk (as he already had buffaloes-buffalo milk has a high fat content) which enabled

him to get a higher price (knowledge in the area paid off). Furthermore, villagers come to obtain advice from this farmer on various problems related to cattle keeping.

Recently this family started keeping a pair of goats for meat purposes (This activity does not demand much time and energy and at the same time butchers come and buy them in the village -the only other person who does goat keeping in the village is no 275).

Paddy cultivation

This farmer's records shows that the total cost of cultivating one hectare of paddy in the previous season (i.e. 94 Yala season) is RS 19,000 (including the family labour). The following calculation indicates that they have been able to retain RS 8,000 within the family)

Ploughing /buffaloes = RS 5,000 (at the prevailing market price)

Family labour in bund preparation = RS 1,000 (10 labour days)

Family labour for other activities = RS 2,000 (20 labour days)

total saving = RS 8,000

Apart from the above saving, he has been able to cut down the money spent for fertilizer as he is able to use cow dung (along with straw). Cow dung is transported to the field by his bullock cart. Recently (during the period when field study was underway) this farmer delegated the responsibility of paddy cultivation to his two sons. This is in order to develop dairy cattle keeping (through devoting more time).

Other Field Crops

This activity is carried out in the home garden in order to meet the consumption requirement of the family.

CASE 288

Family background

This is one of the successful non farming families. The family consists of five members, husband (50), wife (45), two sons (18, and 20), and a daughter (22) who had been married to a neighbouring villager.

Historical background

Upon settling down in the village the husband continued to work as a labour in the Government Irrigation Department. In the mean time wife started making and selling short-eats to boutiques in the village and in neighbouring villages. During the peak seasons, villagers also came to buy these short-eats (as the farmers have to offer meals to their hired labourers in the field). Money saved from this activity was re-invested to cultivate paddy in 0.5 hectare of land based on “*wee poronduwa*” (in the fifth season). Paddy cultivation was carried out by using family labour. Land extent under paddy cultivation was gradually increased (based on the same land tenure) up to one hectare in two consecutive seasons. The saved money from this activity was reinvested to buy a pair of buffaloes. This was to be used in paddy cultivation activities.

Consequently, the wife diversified into making spice packets. This was started in order to effectively utilize spare time (i.e. in the off-peak seasons). Initially the spice packets were sold to a grocery in the village centre. Consequently villagers started to come and buy these spice packets in their premises. This activity is still carried out in a small scale, mainly in off-peak seasons.

The next diversification activity was making bed covers (out of off-cut clothes). This activity was started on a request made by a vendor (who is a friend of the husband), who sells garments in village fairs. The same activity was carried out by Case no 82 i.e. selling bed cover to villagers at RS 100 each. Consequently she also started selling bed cover to villagers at a price of RS 80 each (this is the only such competition observed in the village). According to her, 1 kg of cloth (bought at RS 60/kg) is enough to make 1.5 bed covers.

Other Field Crops

Mushroom is cultivated by this family. Produce is sold to officials in the Mahveli Block Office (and also to the villagers during the harvesting phase). This activity, however, is being carried out at a very small scale (i.e. supply is not enough to meet the demand).

Vegetables are grown in the home garden. This is to meet the home consumption requirements.

Social Contacts

Advise for carrying out business activities are obtained from case 165.

Future plans

To start a tea room in the village (next to her room).

Other observation

It was observed by the researcher, that this female business operator distrusted most of the villagers. Furthermore, she did not maintain close contacts with villagers. Though she understood the value of exchange labour relationships (towards reducing cost of paddy cultivation) and group activities (i.e. division of labour in cultivating mushroom), she does not possess the relevant social awareness or social skills to form contacts with fellow villagers. Given the limited resource context, this has become a major barrier to her business success.

Cases of Failure

CASE 33

Family background

There are six members in the family including four children [two sons (11 and 2 years) and two daughters (16, 14 years)]. Of these three are attending school. Decisions in this family used to be made solely by the husband. However, after the under mentioned major failure, the husband started listening to his wife.

Historical background

In the very first season (after settling in the village), this family cultivated only a part of the land (i.e. one acre). The cultivated land extent was gradually increased from one acre in the first season up to one hectare in the third season. This strategy was adopted by this farmer in order to efficiently allocate family labour. This clearly demonstrates this farmer's awareness of his own resource limitations and allocating the available resources effectively.

In the fifth season, the savings (of RS 26,000) from own paddy production was reinvested to mortgage 8 bushels of paddy land from two fellow villagers. Furthermore, subsequent savings of RS 26,000 were invested in 1989 to mortgage another 10 bushels (2 ha) of paddy land bringing the entire extent of cultivated paddy to 23 bushels in total (4.6 ha) including his own land (gradual increments through reinvestment of savings)

How did he cultivate 4.6 ha (which is well beyond the capability of an average farmer) of paddy?

Cultivation of such a land extent, is well beyond the capabilities of an average farmer. This is mainly due to the high cost of production aggravated by seasonal fluctuation of the supply of labour (please refer to Chapter Five). Therefore it is worthwhile to look into the basic strategies adopted by this farmer in adapting to the above presented conditions.

Paddy cultivation activities was commenced (in each season before the failure) by this family well before the majority of farmers in the area. This strategy was mainly aimed at (a) obtaining hired labour and tractors before the commencement of the peak season and (b) utilizing the family labour in a maximum cost effective manner.

In this setting, the entire land extent was ploughed by a hired tractor. Planting of paddy was done in a staggered manner in which the first block of 2 ha was cultivated with long aged varieties and the remaining land was cultivated with short aged varieties with a gap of about 15 days (in order to adapt to the time constraints analysed in Chapter Five). Harvesting was carried out by contractors. Harvest was stored for about 2 months and sold at a higher price

Many villagers described this farmer as an extremely hard worker. Furthermore he still has a habit of keeping the records on cost of production, which according to him, helps in his continuous attempt to reduce the cost of production.

First diversification activity (OFC cultivation)

Successful cultivation of 4.6 ha of paddy land enabled him to have a gradual savings of RS 1,25,000 by the end of 92/93 Maha season. The major aim of this saving was to purchase a two-wheel tractor to be used in the family's paddy cultivation activities. Furthermore, by this time this farmer was able to gain a reputation as a progressive farmer both among villagers and Mahaveli extension officials.

Consequently (at the beginning of the 1993 Yala season), he was approached by a MARD extension officer. This was in order to persuade him to cultivate chilli and silver melon. Though he initially wanted to refuse this suggestion (as advised by his wife and also due to his lack of experience in cultivating OFC), a decision was made finally to cultivate 1.5 acre of chilli and 0.5 acre of silver melon (despite his wife's advice to do it on a very small scale). The above saved RS 1,25,000 was invested on this activity with the intention of buying a four-wheel tractor (as suggested by the extension officer).

Major crop failure as a turning point

The entire melon crop gave him a total income of RS 4,700 which was well below the cost incurred. Furthermore, the entire chilli crop gave only a total income of RS 27,700. This failure of chilli crop was caused by the little leaf disorder (the causal agent of this disease was yet to be identified), which eventually led to a total loss of more than RS, 100,000.

This disastrous situation made him to request three of his mortgagees to get their land settled. This left him only one hectare of extra paddy land for 93/94 Maha season. The consequences of the above disastrous situation were further aggravated by the unexpected failure of 93/94 Maha paddy crop due to a fungal disease. This situation forced him to hand over the extra one hectare of paddy land to its original owner free of charge. This left him only his own paddy land.

How does he currently cultivate paddy?

This farmer now (the second season after the above failure) employs only family labour. Money for purchasing the required agrochemical is borrowed from a lender in the village (at 20% percent interest per month). Crop is harvested well before the majority of the farmers and sold at a relatively higher price. However he is not in a position to store and sell his paddy at a relatively higher price as he has to settle the borrowed money.

He is planning to give up paddy cultivation temporarily (i.e. to give his land to another farmer on 1/3rd basis for about two seasons) and to cultivate chilli (.25 acre) and onion again as advised by the newly appointed FA to the village.

Why Other Field Crops again?

After speaking to him it was understood that this farmer does not have any idea of the marketability of either of these two crops (he did not have even a vague idea of how to sell these crops, to whom to sell to and at what prices). In fact he was not interested in searching for market information. Instead he had actively searched for

knowledge on the technical aspects of crop management practices He was planning to cultivate 0.25 chilli and onion towards the end of the field study (i.e. May 1995).

The answer he gave to the question asked by the researcher that “why did you specifically decide to plant chilli and onion in May?” was that doing so (i.e. planting chilli and onion in May) will help the chilli plants to get a better anchorage to the soil through a proper root system which reduces the wind damage during the month of June whereas for onions it helps to prevent crop damages due to heavy rainfall at the end of August. These answers clearly reflect the teachings of the agricultural extension services in the area. Furthermore this also demonstrates:

- (a)that he had not learned from his past experience for he to blindly followed the advice of extension officers
- (b)that individual decision making (as opposed to participatory decision making with wife) was a cause of failure.
- (c)that giving priority for production orientation as opposed to market orientation (in the case of OFC cultivation).
- (d)that it is important to obtain required knowledge before diversifying to a new area.
- (e)The nature of his major crop failures (i.e. caused by diseases) had led him to think production first and then market as opposed to produce for the existing market (negative role of own experience in causing economic failure in the absence of proper social contacts).
- (f)negative aspects of top-down approach of agricultural extension services leading to improvisation of non-entrepreneurial farmers (i.e. management is not a sufficient condition).

CASE 253

Family and historical background

This family consists of five members., Husband, wife, a son and three daughters who are still attending school. Decisions are made entirely by the husband.

The husband learned carpentry from his elder brother while he was attending school. He dropped out of school in grade 9 (in 1966) and subsequently came to Polonnaruwa (One of the major towns around System B). Upon coming to Polonnaruwa, he initially worked as a helper (labourer) to two carpenters consecutively at a wage of RS 5 a day. In 1969 he joined the Land Development Department as a helper to a carpenter on a temporary assignment at a wage of RS 8.30 a day.

Upon completion of this assignment, he started “chena” cultivation as a joint venture with another farmer in the area who later became his father-in-law. He got married in 1970.and started his own carpentry business on a very small scale (in the same year).

In 1973, he took an assignment from a Sri Lankan Construction company (which had taken a long term assignment for some construction work in the future System B). to construct temporary buildings for officers’ quarters and also to make their household furniture. This task was successfully completed after employing another three helpers. Successful accomplishment of this assignment helped him to establish better contacts with the site manager.

In 1981 the site manager of the above company helped this farmer to obtain a small scale sub contract (for carpentry work) from a North American Construction company, which commenced the construction work of the Maduru Oya Dam of the System B.

Upon completing the construction of Maduru Oya Dam, the remaining construction work (of the left bank channels and roads) in System B were taken over by another North American Company. However due to some political and personal reasons he was not able to get a sub contract from this company. As a result, this farmer joined the company as a labourer (at a wage of RS 26 a day) with the main objective of establishing contacts with site managers. By this time he had also been an employer of two labourers in his own carpentry business.

While working as a labourer, he was able to impress site managers (skills and hard work had paid off). Consequently he was promoted to a carpenter (supervisory grade). Subsequently he was able to out perform the Sri Lankan head carpenter in the site. Subsequent incidents led the company officials to award this farmer his first subcontract which required him to employ one hundred labourers from the following day onwards.

He overcame the problem of finding 100 labourers by delegating the task (i.e. to find labourers) to another ten needy neighbours. Each of these ten neighbours was asked to find ten more labourers. As a result he was able to find 116 labourers (which was

well above the requirement). This accomplishment further impressed the site officials.

This subcontracts gave him an opportunity to earn a profit of about RS 500-800 a day (which was well above his daily wage of RS, 26 a day). This led to a saving of about RS 145,000 (i.e. in a period of nine months). About RS 143,000 was re-invested in purchasing a four wheel tractor (for RS 1,43,000), which was then hired out to the same company on a hire agreement of RS 500 a day.

Activities after settling down in the village

The family settled down in the village in 1985. Husband continued to work as a subcontractor to the above company till 1986. By this time this family owned six vehicles (a mini coach, two four-wheel tractors , two cars and a two wheel tractor) and a saving of about RS 200,000, totaling to about RS 2 million worth of assets and employed 7 household servants (in addition to two drivers and a mechanic). Paddy cultivation at this time, was carried out entirely by hired labourers.

Diversifying into a different market segment

Upon finishing the sub contracts in the foreign company, he undertook a sub contract from the government to construct buildings of the village school (as a joint venture with his brother), for which the above savings of RS 200,000 was reinvested. His other involvement led him to delegate the responsibility of this assignment to his brother. Eventually a full payment for this assignment was denied by the relevant officials based on (the reasoning) that their “failure to achieve the required standards”. This left him only the six vehicles and the house as the only wealth (though the construction has not yet been completed, his house is still the largest and the only house in the village with an overhead water tank, bath rooms etc.).

The above failure in his construction career led him to sell one of his tractors for RS 85,000 (well below the market price). Money obtained from selling the tractor was reinvested on another government sub contract which also eventually ended in failure. Likewise three subsequent failures (of sub contracts from the government) led him to sell off three more vehicles.

His other business activities viz.; using the mini coach for passenger transportation and hiring out tractors also came to an abrupt end. By the time of the field study, this farmer was a wage labourer who did not even have the control of his own land (as he has mortgaged it).

His skills in forming contacts formed the foundation of his economic success. This was first with the site managers of the Sri Lankan construction company who subsequently introduced him to the first North American Company. Earnings from the first subcontract was invested to develop his carpentry (to purchase equipment and to employ two employees-re investment). His long term focus (joining the second North American company as a labourer with the intention of establishing contacts with site managers) coupled with his skills and hard work enabled him to get the first sub-contract from the second company (which could also be taken as a land mark in his economic development).

His failure began (or appear to began) with his undertaking of subcontracts in the government sector. This was mainly caused by his failure to bribe the relevant officials. This was due to his inadequate knowledge "that the survival and success in this new environment is entirely based on bribes". His failure to adapt to the new environment (which was significantly different from the previous environment in which the survival and success was based on honesty, skills and hard working) was further aggravated by his lack of social networks and contacts (in the relevant area), which prevented him getting the appropriate information (i.e. on : whether bribing is necessary, who to bribe, how to do it etc.).

On the other hand, delegating sole responsibility of the construction work to his inexperienced brother provided the relevant officials with the basic grounds to reject payments. This also shows his poor management and organization skills.

His own explanation of his failure

Management failure

Failure to manage a large sum of money. Failure in labour management (unnecessary delegation of responsibilities with minimal supervision)

Mini coach and the tractors

Pilfering of income by unsupervised employees. High cost of repair incurred for vehicles due to poor maintenance (i.e. as a result of pilfering the allocated money)

Paddy Farming

Low returns due to not giving proper attention for both crop management and the supervision of employees.

High cost incurred for socialization coupled with alcoholism

High cost for entertaining the friends (mainly for alcohol). Less attention for own business activities including labour management in paddy cultivation (for example see case 82 for contract versus hired labour).

Unrelated diversification coupled with improper time management

As far as his portfolio of businesses are concerned it is quite evident that he had diversified into entirely unrelated areas such as construction work, hiring out tractors for agricultural purposes, passenger transportation, and paddy cultivation which was based entirely on hired labourers. Furthermore, those businesses (compared to the other businesses in the village) were not restricted to the village boundaries. This further demanded efficient time management for supervision of the employees (which he failed to fulfill) At the same time, knowledge required to carry out activities in some of these diversified areas was well beyond his experience, which also provided an opportunity for his employees to pilfer money.

What has he learned from his failure?

The need to concentrate on related diversification (diversification related to paddy cultivation).

The need to limit the business growth (both in terms of number of business and geographical proximity) to a manageable level, which allows for proper time management.

Explanation provided by the villagers for his failure

It was the opinion of his fellow villagers that he (a) was a highly arrogant person and (b) did not keep company with any villager. This created a hostile environment for him in the village. According to them, this farmer spent most of his time entertaining officials at various levels in the Mahaveli organizational structure, which also left him inadequate time to supervise his employees who were involved in various pilfering activities. Though most of the villagers were aware of this situation nobody wanted to inform him due to his arrogant attitude towards the fellow villagers.

CASE 275

Family Background

This family consists of husband, wife and seven children. The eldest is a son of 18. Others are five younger sons and the youngest daughter of five days old (at the first contact with this farmer in the field research). Four children are still at school.

Resource status

- paddy land (1 hectare)
- 5 milk cattle
- pair of buffaloes.
- a herd of 15 goats

Historical back ground

He first worked in a boutique as a labourer. Then he joined the Government Irrigation Department as a temporary labourer and consequently joined a North American construction company (see case 253) as a driver. Upon finishing the work (after 2.5 years of work) in this company he joined another North American company again as a driver in a diesel lorry. Savings from his salary and the income from pilfering diesel were invested in buying a four wheel tractor, a van and a motor bike.

Part of the money saved from the above employment (about RS 70,000) was invested for mortgaging four hectares of paddy land (which increased the total amount of cultivated paddy lands to five hectares). Paddy cultivation, like case 253, was carried out mainly by hired labourers, which eventually led to crop failures for two consecutive seasons. This was mainly due to his not paying proper attention for paddy cultivation (the priority was given for hiring out the tractor which left him much less time for paddy cultivation activities). He was not able to recover the income of hiring out the tractor leading to high default rates (as most of the transactions were based on credit).

Consequently he borrowed money at a higher interest rate. This was in order to continue paddy cultivation and also to do a major repair to the tractor. This subsequently led him to sell the van(RS 12,000) and then the tractor (RS90,000). After settling his debts he again purchased another fairly old tractor (RS 50,000). This tractor was hired out on a contract basis for non agricultural purposes (RS 500 a day).

The second tractor was sold for RS 65,000 and the money was reinvested on purchasing a rice mill for RS 40,000. This was the second rice mill installed in the village. The rice milling business also came to an abrupt end due to four other villagers starting the same business (due to his inability to maintain the existing customers even after reducing the price from RS 14/bushel of paddy to RS 8/bushel-mainly due to non-association with the villagers). This failure forced him to sell his labour as a driver. This left him a little time for paddy cultivation activities. This problem was aggravated due to one of his child falling seriously ill which led him to borrow money at high interest (RS 30,000).

His explanation for his failure

Inability to give proper attention to any of the activities as a result of carrying out more than one income generating activity at one point in time,

Insufficient time allocation for labour management in paddy cultivation activities leading to high cost and low returns.

Family problems-wife's tendency towards high expenditure in home consumption.

Inability to control her (according the villagers this is still the case).

Breaking off with one of his brother in laws, who advised him in his business activities.

Non-association with fellow villagers (in initial stages) reduced the customers for rice mill at a time of severe competition.

Alcoholism-expenditure (average RS 50 a day), and unnecessary friends, more time spent on entertaining them.

Current business activities: Paddy cultivation

Family labour is employed for land preparation and crop management activities. He is a member of the "field canal society" described in Case 250. Therefore the exchange arrangements for labour and buffaloes described under case 250 applied to this farmer as well. He accepts that this arrangement is very beneficial to him in reducing the cost of production and also in adhering to various time constraints.

Both long age and short age varieties are cultivated ("samba") together in a one season. This is done in a staggered manner in order to manage the time efficiently (see case 60). He is now giving more attention to his paddy cultivation activities (timely cultivation etc.). Part of the harvest is sold a few days after harvesting. This is in order to recover the cost incurred and to settle borrowed money (from case 82). The rest is stored and sold later at a higher price. He also works as a driver, but only after finishing his paddy cultivation activities.

Cases of Failure and Subsequent Success

CASE 92

Family background

Family consists of six members. Husband, wife, three daughters and a son. Eldest are daughters of 19 and 17. The next are a son of 14 and a daughter of 11. Both younger children are still at school. The wife and two elder daughters are a source of family labour. The decisions in the family are taken solely by the husband. This farmer is a community leader who gives leadership to many formal societies in the village.

This case study demonstrates, how paddy farming activities helped this farmer to put a foundation for economic success and subsequent unrelated diversification activities led to his business failure.

Resource status

- 4 hectare paddy land (one own, two “wee poronduwa” and the rest on 1/3rd basis)
- 0.5 acre of homestead
- rice mill
- motor bike
- two-wheel tractor

How this family became economically successful?

Upon receipt of the paddy land, this farmer had cultivated only a 0.5 hectare of paddy land (like in cases 33 and 96). The cultivated land extent had been gradually increased to one hectare in the second season. Successful paddy cultivation carried out over a period of five consecutive seasons had led him to gradually accumulate a saving of RS 25,000.

By this time (in 1987) he had launched (by investing the above saved money) his first diversification activity i.e. starting a boutique in order to cater for people who lived in his part of the village. This investment has helped him to gradually increase the value of the goods held in his boutique up to RS 65,000 in 1990. By this time he had a daily turn over of about RS 4000/day (mainly on credit).

The success of the boutique led him to his next diversification activity i.e. buying paddy from the villagers (mainly from the customers who bought goods on credit) and re-selling to outside collectors. This activity brought about the following major advantages viz.

- (a)reducing the risk of defaulters by introducing a barter system in which household consumable items were sold on credit with the agreement that their paddy should be sold to him.
- (b)establishing contacts with outside paddy collectors (which helped him in selling his own paddy at a higher price too)
- (c)attracting more customers both for boutique business as well as for paddy collecting business.

He had then diversified into the rice milling business, which led him to employ his first employee to run it. Consequently he diversified into a tea room next to his boutique. The main aim of starting this tea room had been to provide refreshment for customers who came to the boutique and the rice mill (please note that the boutique in the Sri Lankan rural context provides a place for social gathering). Responsibility of conducting this activity (along with a premises to operate the tea room) had been solely delegated to a fellow villager, with the agreement that he should purchase the required inputs (i.e. sugar, tea, flour etc.) from the boutique on a short term credit basis (daily basis). This agreement was such that the profit from this business could be kept with the operator (i.e. the fellow villager).

His next diversification activity had been a bicycle repair shop, which had led to the recruitment of his second employee with fully delegated responsibilities to run the business. Consequently, he had started a workshop (blacksmith) to provide the necessary services to villagers to get their agricultural implements repaired. The sole responsibility of operating this business had also been delegated to a blacksmith (from a neighbouring village) employed by him. His final diversification activity had been a hair dressing salon, the running of which had also been delegated to a skilled villager.

All the above activities viz. bicycle repair shop, workshop and the hair dressing salon had been started as a result of the difficulties he had experienced (i.e. spotting opportunities) due to the absence of those service providers in the village.

The successful operation of the above business led him to save enough to purchase a two-wheel tractor to be used in his large scale paddy cultivation activities. Furthermore, the established trust between him and the wholesale distributors (from whom he purchased consumable items sold in the boutique) had provided him the background to start his next business activity related to the boutique, i.e. wholesale business. In this case he had started selling consumable items to the other boutiques in the village at a wholesale level. The goods for this business had been provided by the above mentioned wholesale distributors on a two weekly credit basis (i.e. utilizing the existing contacts to overcome potential competition and a hostile environment).

Turning point of the diversified business

Failure of the business owned by him started with the salon operator starting his own business in a better location. Consequently, the operators of the bicycle repair shop, and the blacksmith had started their own businesses in different locations. These incidents had led him to take the responsibility of operating the rice milling business to his own hands. Furthermore, increase of cultivated paddy extent (10 hectares by that time) had also brought about management difficulties in operating his portfolio of businesses, which had gradually led to the failure of the boutique business too. Consequently, he began to think that his business failure was caused by witchcraft directed towards him by a jealous fellow villager. This strong belief forced him to close down his boutique business, which eventually led to the cessation of the paddy collection and the tea room business too.

Current business activities

By the time of the field study, the only activities carried out by this family were paddy cultivation, rice milling and hiring out the tractor (at a limited scale)

Paddy cultivation was the major activity conducted by the farmers.

Analysis of his paddy cultivation activities revealed that he:

- (a) always adhered to the various time constraints described in the Chapter Five
- (b) adopted various strategies to reduce cost of production (planning the production activities through keeping records and taking every attempt to stay within the plan by using family and contract labourers as opposed to hired labourers)

Paddy is usually stored and sold (at the middle of the following season) at higher prices. However, a recent outbreak of rat infestation had led him to adopt a strategy of selling paddy just after the harvesting to a known trader (contact established through his previous paddy buying and selling business) and obtaining money later at the prevailing market price (i.e. adapting to the natural environment through entrepreneurship-i.e. decision of when to sell is replaced by who to sell to and when to receive payments).

The tractor was mainly used for his own land preparation activities. Hiring out of the tractor was carried out only after the completion of his own land preparation activities.

Rice milling business was carried out mainly during the off-peak seasons.

CASE 271

Family background

There are five members in the family. Husband, wife and three children who are at school (daughter (13) and two sons (11 and 10). Decision in the family are taken by husband and wife collectively (after the under mentioned major business failure).

Historical Background

The husband fell ill in the second season (after settling down in the village). Subsequently own paddy land was given to a fellow villager on 1/3rd basis (as he was physically not fit) and started an illegal business of distilling and selling (both at retail and wholesale levels) illicit liquor ("Kassippu"). Customers for this business came from the villagers as well as from neighbouring villages. Money saved from this activity was re-invested to buy paddy from villagers and to sell to outside traders (second diversification). The nature of this activity was different from that of the other paddy collectors in the village, as he collected paddy from villagers, and transported (by a hired lorry with a driver) it to traders in Polonnaruwa. (refer to case 60 for example). Subsequently, paddy cultivation was re-started in 4 hectares of land (1 hectare owned and three hectares mortgaged land).

In the mean time, his paddy business provided him with an opportunity to increase the volume traded as he was able to establish a better relationship with a large scale wholesale dealer cum rice mill owner in Polonnaruwa. As a result he started buying paddy from the villagers on short term (one week) credit (as he did not have sufficient cash to meet the increased demand). The collected paddy was transported to the trader daily with the understanding that payment would be settled at the end of each week. The business became a success. Subsequently he made many friends outside the village. The bad influence of these friends eventually made him an alcoholic and a gambler.

In 91/92 Maha season, he was mugged (RS 1,35,000) by a gang of robbers on his way back from Polonnaruwa. Later he found out that this robbery was planned by the driver (of the lorry) who had a greater awareness of this farmer's routine behaviour (i.e. whereabouts and alcoholism etc.). The following day he lost RS, 60,000 from gambling (in an attempt to make up the stolen money). These incidents eventually led him to severe financial indebtedness. Subsequently he sold, 15 cattle, a bullock cart and, a motor bike in order to settle payments to villagers (i.e. .for the paddy he purchased from the villagers on credit). This also led him to request the original owners of his mortgaged lands to settle their lands. Subsequently his liquor business had also became a failure. This was due to loss of customers as a result of some other villagers starting the same business.

Consequently, (in an attempt to recover the money he lost), he diversified into Chilli cultivation in one acre of land. However, insufficient working capital eventually led to crop failure. This led him to mortgage (for RS 25,000) his paddy land to a friend (another illicit liquor dealer in the village), with the agreement that he would work the land based on "wee poronduwa".

Consequently, with the influence of cases 165 and 250, he gave up his socially undesirable behaviour (i.e. selling illicit liquor, alcoholism and gambling) and started concentrating more on paddy cultivation. Simultaneously he diversified into selling vegetables at village fairs during the off-peak seasons. For this he used one of his existing contacts (i.e. a friend from his original village who was in the same business) to get transportation facilities (from fair to fair) free of charge. Vegetables for this activity were mainly purchased from the villagers as well as from neighbouring villages.

Money saved from the above activity was re-invested to start a boutique. Commencing the boutique, led him to temporarily cease the above vegetable selling activity. In this new activity, he capitalized the above friendship to get the necessary transportation facilities. At the same time, he was also able to utilize another personal contact (i.e. the trader in Polonnaruwa with whom he carried out the paddy collecting business) to obtain necessary goods on credit. After two seasons the boutique became a success. Upon the success of the boutique, he diversified into rice processing business on a very small scale (i.e. processing of about 7 to 8 kg of rice per day). The paddy from his own (i.e. mortgaged but work based on "*wee poronduwa*") land is processed and sold in his boutique. Running the boutique in the peak season is entirely delegated to his wife (as he engaged in paddy cultivation activities).

Next he increased the product range offered in the boutique by introducing coconut based building materials such as ropes, Cadjans (i.e. a roofing material made of coconut leaves), rafters, rippers etc. These products were supplied to the villagers on demand mainly in the third phase of paddy cultivation during which the villagers have money to re-furbish their dwellings. In this instance he was able to capitalize his two existing contacts (a)the friend who provided transportation facilities and (b)another friend who was in the same business to obtain these materials on credit.

Subsequently he handed over four bushels (i.e. 4/5th of a hectare) of paddy land to a fellow villager on 1/3rd basis. According to him, the amount of paddy he gains from cultivation of one bushel is more than enough to settle the rent (i.e. the initial mortgage agreement), whereas the 1/3rd portion is enough to meet consumption requirements as well as for small scale paddy processing business. This decrease in cultivated paddy land extent, helped him in efficient allocation of time and family labour in both paddy cultivation and the boutique business. He acknowledges that Cases 165 and 250 influenced greatly on his success in the later ventures.

APPENDIX 6

Topic Guide Entrepreneurial Processes in an Apparently Uniform Context: Study of Rural Farmers in Sri Lanka

FAMILY BACKGROUND

Farming/non farming family

Where did the farmer live prior to this /what was the main occupation

When did the farmer first settled in the village

dependants/family labour/family participation in business activities

Educational background

Farmer organisation

Social involvement

Other ...

FARM CHARACTERISTICS

Location (in relation to home, main road etc.)

Irrigation channel (distributary canal and field channel)

Head end/tail end

Water availability

Other observations related to the location (if any?)

Land area under farming

Tenancy type and extents

FARM BUSINESS ACTIVITIES AND RELATED PRODUCTION AND MARKETING ACTIVITIES

What to produce (what crops/animals) and why

Suitability in relation to natural environment

Soil

Pest/disease

Water availability

Weather

Other

Marketability

Awareness of the market windows

Forward/buyback contracts

Contacts with customers

Other

To comply with the activities of other farmers

Matched with own

Skills

Knowledge

Other resources (land, labour, capital, time, social networks)

Extension and support services

Outcome of a discussion with

- Friend
- Family members
- Relative
- Other community member
- Informal groups
- Societies
- Other

Follow the tradition

Need for doing things differently

How should I best produce them (cost reduction strategies)

Land extent

- Increased (economies of scale)
- Decreased (to match the other resources)

Labour saving strategies

- Mechanisation
- Own buffaloes/cattle/tractor
- Family labour
- Exchange labour
- Free labour (exchanged with other activities)
- Social network
- Staggered cultivation(with one variety/ different varieties)
- Informal groups
- Societies

Cost of agrochemical/fertilizer

- Forward contracting
- Purchased from a known person on credit
- Mass purchase with a discount (office bearer/increased extent/groups/societies)
- Compost/green manure/farm yard manure
- Other

Cost of seed material

- Own produce
- Forward/buy-back contracts
- Other

Timely planting to avoid unnecessary wastage (rainfall/pest/diseases)

Other observations

How much to produce

- To match own resources
- Availability of other resources (social networks)
- Informal group
- Societies
- Marketability

- Economies of scale
- Home consumption
- Extension and support services
- Other

When to produce

- Water availability/activities of the field channel society
- Soil moisture conditions
- Pest/disease conditions
- Marketability (price awareness/market windows)
- Labour saving strategy (staggered cultivation)
- Availability of other resources
- Extension and support services
- Other observations

Where to produce

- Rainfall/water availability
- Distance (from home, form one land to another)
- Related with other business activities

Who to sell to/of what quality

- Forward/buy-back contracting (export market/local market)
- Contacts/long terms relationship with customers
- Market windows (based on time and geographical location)
- To avoid high cost of quality control
- To gain a higher price by increasing the quality
- Easiness (labour/time/money)
- Overcome resource limitations (storage facilities etc.)
- Other observations

When to sell

- Market windows
- Value adding
- Resource availability

In what form to sell

- Market windows
- Value adding (by further processing)
- Other business activities

How to sell

- Direct marketing (own outlets/own distribution)
- Convenience (time/cost reduction)
- Collective bargaining (groups/societies)
- Various market opportunities (more than one restricted options)
- Other observations

Others observations?

OTHER BUSINESS ACTIVITIES

What
When
Why
How
Where
Customers
Competitors
Other

ATTITUDES, BELIEFS/VALUES

Society/community/family
Delegation
Extension and support services
Technology (new/old)
Time
Competition
Consumption/thrift
Other

AWARENESS OF THE ENVIRONMENT

Social/community
Biophysical
Market (factor/product)
Government/project policies
Other