
**Access to Land, the Household, and Food Security:
Exploring gendered links in Rural South India**

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Declaration

I declare that this thesis is entirely my own work and no part of it has been submitted for any other degree of qualification.

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Abstract

Despite sufficient food production on the national level, an estimated 37% to 60% of households in India are food insecure. Food security is defined as when all people, at all times, have physical and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life. Food security rests on four pillars; food availability, accessibility, utility, and stability. When food security is limited or uncertain, there is food insecurity. In rural India, land is one of the most important assets determining command over food, but not all rural household own land. Social inequalities based on caste and gender permeate access to land among social actors and result in food insecurity among certain groups of people. This dissertation investigates the links between access to land and household food (in)security in rural South India by answering two research questions: 1) What is the impact of gendered social practices on access to land in rural South India and why? 2) What is the role of access to land in household food security and why?

To answer these questions, three theories are adopted and combined into an analytical framework: the entitlement approach, a bargaining approach, and a bundle of rights metaphor. The entitlement approach, developed by Amartya Sen, analyses famine or starvation as a problem of food accessibility rather than availability, as different social actors have different capabilities to obtain command over food. A bargaining approach considers interaction between social actors through cooperative conflict in which the outcome depends on respective bargaining powers. The entitlement approach and bargaining approach both consider property as important in entitlements and bargaining, but property relations are not always equivalent to ownership. A bundle of rights metaphor explains property relations as representing a broader range of arrangements including, but not limited to, ownership.

Using ethnography, this study is based on data collected through five-and-a-half months of fieldwork, which included conducting interviews, participant observation, and a household survey. The main findings resulting from this research are 1) women rarely own land but are unconcerned by their lack of landownership; households' struggle for a sustainable livelihood results in women's views that the intra-household distribution of landownership is insignificant, except in circumstances of a household break-up through divorce or widowhood. This finding affects the usefulness of the bargaining approach for analysing links between women's landownership and women's intra-household bargaining power for poor households; 2) hunger and starvation are not prevalent in the research area because of the food rations provided through the Public Distribution System; 3) households depending on agricultural wage labour as main source of livelihood are most vulnerable to food insecurity; 4) landless households with non-agricultural livelihoods are less vulnerable to food insecurity compared to marginal and small farmers; 5) the bundle of rights derived from access to land is not found to predict vulnerability to food insecurity, but does determine how land can contribute to household food security and it determines farmers' opportunities to invest in cultivation; 6) landownership does not equal control over land; women who own

arable land have little influence over land management, while women with (temporarily) absent husbands have more control over land management despite not owning the land. An intra-household transfer of landownership does not result in a shift in bargaining positions or a shift in control over land; 7) intra-household allocation of food is equal in type of food and based on need and preference in quantity of food. No evidence is found to indicate that particular household members consistently consume insufficient amounts of food or less diverse food compared to other household members. Therefore, there is no evidence to support a link between the intra-household distribution of landownership and intra-household food allocation.

Glossary of Acronyms

BC	Backward Classes
BPL	Below Poverty Line
FC	Forward Castes
FRA	Forest Rights Act
FRC	Forest Rights Committee
HFIAS	Household Food Insecurity Access Scale
MBC	Most Backward Classes
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
NFHS-3	National Family Health Survey 2005-06
NFHS-4	National Family Health Survey 2015-16
NFSA	National Food Security Act
OBC	Other Backward Classes
PDS	Public Distribution System
ROCSA	Rotating Credit and Savings Associations
SC	Scheduled Castes
SHG	Self-Help-Group
ST	Scheduled Tribes
VAO	Village Administrative Officer

Glossary of Terms

<i>Acre</i>	Unit of land commonly used in India. 1 acre equals 0.4047 hectares (or 4.047 m ²)
<i>Anganwadi</i>	A rural childcare centre that includes pre-schooling and basic healthcare
<i>Aruval</i>	A type of billhook, a tool used for cutting wood but also used in the kitchen
<i>Desi cows</i>	Domestic cows, native to the Indian subcontinent of which there are various breeds
<i>Gram Sabha</i>	A meeting of the local governance body and the entire village electorate through which disputes are settled through arbitration.
<i>Jati</i>	Sub-caste
<i>Kali</i>	A traditional dish of dough-like balls made from finger-millet flour
<i>Kanji</i>	Boiled rice, sometimes left-over rice, with water and salt added
<i>Kodam</i>	Large pots, usually plastic or stainless steel, mainly used for water collection and storage
<i>Koozh</i>	A porridge made from finger millet
<i>Kootu patta</i>	Joint title deed, can be between spouses, between two or more brothers, or multiple unrelated people
<i>Murukku</i>	A savoury snack
<i>Patta</i>	Land title deed
<i>Pavan</i>	Measurement of weight used for gold that refers to the British sovereign (1 <i>pavan</i> equals 8 grams)
<i>Panchayat Village</i>	An administrative village that clusters individual villages for local governance
<i>Poramboke</i>	Government owned land for which no <i>pattas</i> are given and originally outside the books, so no taxes were paid over these lands.
<i>Puja</i>	Prayer ritual
<i>Pongal</i>	A three-day harvest festival, usually around mid-January
<i>Ragi</i>	Finger millet
<i>Sangam</i>	An association or society, usually connoting a women's association
<i>Solam</i>	High-growing green grasses used as fodder for cattle
<i>Tahsildar</i>	The chief official of a taluk in charge of land revenue
<i>Thali</i>	A necklace and marriage ornament
<i>Taluk</i>	An administrative area that clusters blocks and Panchayat Villages for local governance
<i>Tiffin</i>	Refers to particular food items, typically a lighter meal compared to boiled rice, usually eaten for breakfast and/or dinner

TVS Refers to a scooter brand TVS Scooty, but which is used to refer to any scooter brand

Unni A tiny dark-brown flea the forest gets infested with during the colder months

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Chapter 1 - Introduction

On the first morning of my stay in the village of Katuyanur (pseudonym), Deetshida, my interpreter, and I walked towards the edge of the village trying to get our phones to connect to a cell tower. A middle-aged woman passing by asked if we wanted to come with her to the forest. Eager to meet villagers, and perhaps even more eager to see the forest, we followed the woman to the last house in the village. Three other women in their 40s stood there waiting, each with an *aruval*, a type of billhook, a towel, and a bottle of water in their hands. When the women understood we were coming with them to the forest they called three teenage boys to come along. No road or path lead directly to the forest from this house, so we walked through the agricultural fields, using narrow elevated ridges between fields as paths. We passed several fields of sugarcane, already rising high as harvest-time was only one month away. Two women took the lead walking along the ridges, while carefully cutting down stalks of sugarcane obstructing our way, as the razor-sharp grass-like leaves can make nasty cuts to the skin.

An unpaved road marked the border between the agricultural fields and the forest, and we turned onto a small path leading off the road into the forest. A green warning sign from the Forest Department stated only authorised persons can access the reserved forest and that trespassers will be prosecuted. I asked the women if Deetshida and I were allowed to enter the forest. The women insisted it was fine, that no problems would come from it. One of them added, while laughing, that we could come as long as we would not take pictures of them cutting branches and send it through WhatsApp to the Forest Ranger. We walked deeper into the forest, which was not as dense as I had imagined, with small tree trunks, low treetops, and little ground cover. One woman told us to wait while she sharpened her *aruval* on a flat rock. After walking a little further, we heard sounds coming towards us and a big herd of bullocks came running in our direction. As soon as the herd spotted us, they stopped and stood staring at us until one of the women chased them away. One woman told the boys to take Deetshida and me back to the village while they would continue deeper into the forest to gather firewood. We took a different route back, following the unpaved road between the forest and the agricultural fields which led us to the opposite side of the village compared to where we had set off with the women.

This brief account from my fieldnotes contains multiple references to various arrangements of access to land and forest. The four women whom we accompanied to the forest were agricultural wage labourers, three of whom did not have any access to arable land. They did have access to privately owned agricultural fields to use as path, although they should avoid crossing fields and only use the elevated ridges at the borders of fields. Access to the reserved forest is restricted to authorised people. The four women belong to the Malayali community, which makes them authorised to access the forest. Their access does have restrictions, for example, they did not have the authority to grant Deetshida and I access. Withdrawing minor forest produce, such as firewood, is allowed, but cutting trees or branches is not, hence the woman's comment about not sending pictures of them cutting wood to the Forest Ranger. Finally, while grazing of

livestock is not allowed in the reserved forest, herds of bullocks are roaming around as the owners have struck an informal agreement with Forest Rangers.

This dissertation aims to investigate the links between various types of access to land and household food (in)security in rural South India. It focuses on two research questions: 1) What is the impact of gendered social practices on access to land in rural South India and why? 2) What is the role of access to land in household food security and why? Answering these questions contributes towards a better understanding of the role of access to land in household food security in South India and how gender plays a role in both. The objective of this study is, through ethnography, to get a clear, in-depth understanding of local practices, beliefs, and behaviours about access to land and command over food in one village in Salem District, Tamil Nadu. The main findings are that access to land is highly gendered, particularly due to a gendered division of labour in which husbands and brothers assume control over land. Inheritance practices discriminate against women, making it difficult for women to claim their inheritance in landed property. Simultaneously, women are unconcerned by their lack of landownership compared to men. Households' struggle for command over food and repaying loans results in a perception that the intra-household distribution of landownership is insignificant. Different arrangements of access to land contribute differently to household food security, depending on the bundle of rights derived from access to land, the size of land, and which other social units hold a bundle of rights to the land. Landownership does not equal control over land and reallocating property does not automatically result in a reallocation of power. This study found no evidence to indicate that specific household members eat less food or less diverse food as a result of food shortage. Therefore, no link is found between the intra-household distribution of landownership and the intra-household allocation of food.



On a national level, India produces enough food to achieve food security, but on a household level, achieving food security continues to be a problem (Mitra, 2014). Concern Worldwide and Welthungerhilfe publish an annual report on progress and setbacks in the fight against hunger on the global, regional, and national level. This annual report, the Global Hunger Index (GHI), ranks countries according to hunger level based on data on undernourishment, child wasting, child stunting, and child mortality. In the 2021 report, published October 2021, India ranks a mere 101st out of 116 countries with a GHI-score of 27.5, improving from a GHI-score of 38.9 in 2000 and 32.0 in 2010, but remaining in a state of serious hunger. Estimates of the number of food insecure households in India are uncertain as different approaches or indicators for measurement give different results (Tandon and Landes, 2011). Based on calorie consumption data from individual households between 2004 and 2005, using the 61st round of the National Sample Survey, Tandon and Landes (2011) estimate that at least 60% of India's total population consumes less than 2,100 calories per day. Food insecurity is more prevalent among particular social groups, as Mitra (2014) found that nearly 99% of India's below the poverty line (BPL) households belong to scheduled tribes and scheduled castes.

Thus, despite sufficient production of food, India continues to struggle with high rates of undernutrition.

Food security, however, is not only about calorie intake or only about income. Rather, food security is defined as “when all people, at all times, have physical and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life” (World Food Summit in 1996, cited in: Santos *et al.*, 2014, p.861). Food security rests on four pillars: food availability, accessibility, utility, and stability (Berry *et al.*, 2015; Sharma, 2013), and encapsulates vulnerability to current and future command over food (Barrett, 2010). These four pillars are interdependent as problems in one pillar are likely to affect the other pillars. When food security is lacking, limited, or uncertain, there is food insecurity (Campbell, 1991; Maxwell and Wiebe, 1999). Food insecurity does not immediately imply starvation; different degrees of food insecurity occur, suggesting a scale with food security on the one end and severe food insecurity on the other. The entitlement approach, developed by Amartya Sen (1976, 1981, 1985), analyses famine or starvation as a problem of food accessibility rather than availability, as different (groups of) people have different capabilities to obtain command over food. Sen (1985) refers to problems in obtaining command over food as the ‘acquisition problem’, which can be accompanied by a decline of food availability but does not have to. Similarly, an entitlement approach to food (in)security considers how different (groups of) people have different capabilities for command over food, resulting in a place scaled somewhere between severe food insecurity and food security.

India’s population is primarily rural. According to the census of India 2011, the next census is planned for 2021, nearly 70% of the total population of 1.2 billion people live in rural areas. These rural households depend on access to land for food security (Pallas, 2011; S. Rao, 2017). Not all rural households own land; in 2003-4, 31% of Indian rural households were landless (Vikas Rawal, 2008 in Harriss, 2013), although landless households might have access to arable land without ownership, for example through rent. Access to land constitutes a relationship between people and a common understanding of who have which rights to which lands (Meinzen-Dick *et al.*, 1997). Access to land not only refers to access to privately owned property but to a variety of property types. Economists distinguish four important types of property; open access, common property, state property, and private property, which Benda-Beckmann refers to as the ‘Big Four’ (Benda-Beckmann 2001 in Benda-Beckmann, Benda-Beckmann and Wiber, 2006). However, anthropologists critique the categorisation of property in four distinct groups, arguing that the categories unjustifiably conflate all forms of property and ignore interconnectedness between the categories (Turner, 2017).

Access to land refers not only to legal ownership but contains a variety of arrangements. Access relates to “the ability to benefit from things” (Ribot and Peluso, 2003, p.153), not only to ownership over the ‘thing’. Agarwal (1994) distinguishes between *rights* to land, defined as “legally and socially recognized and enforceable by an external legitimized authority, be it a village-level institution or some higher-level judicial or executive body of the State” and *access* to land, which includes rights to land but also informal arrangements about use of land (1994, p.19). Legal or social recognition of rights to land secure continued

access; without such recognition, others may contest or claim these rights with loss or restriction of access as a consequence, or demands for shares or taxes (Devereux, 2001). Sharma (1980) emphasises that effective control over land is not equivalent to official registrations of landownership. A view on landed property that includes but is not limited to ownership allows making distinctions between control, ownership, and other forms of access to land. One useful approach for the analysis of property relations is through the metaphor of a 'bundle of rights' in which rights represent the 'sticks' that make up a bundle. The metaphor has four major uses; to refer to all property rights and obligations that exist within one society, to refer to a specific property arrangement and the rights it contains, to refer to the specific rights derived from one particular property, and to refer to the specific property rights held by one social unit (Benda-Beckmann, Benda-Beckmann and Wiber, 2006). This entails that this study also includes landless households. Landless households do not own arable land but may nevertheless have access to (arable) land, or to forests. To understand the role of access to land in household food security, comparing households with various types of access to land to households without any access to land is likewise important.

Land is not solely a material asset; land is intertwined with gendered meanings and identities within the household, the community, village, state, and market (N. Rao, 2017). The importance of social, cultural, and political relations for the analysis of property relations, specifically of access to land, is evident in the social inequalities that permeate access to land. These social inequalities in access to land result in food insecurity for particular groups of people (Pain, Ojha and Adhikari, 2014), especially across caste, age, and gender (Mitra, 2014). Although data on how many women in India own land does not exist, the Agriculture Census 2015-16 demonstrates that women operate only 23% of agricultural holdings, while men operate the remaining 77% of holdings (Agriculture Census Division). Changes in political-economic circumstances result in changing terms of access to resources for specific individuals or groups (Ribot and Peluso, 2003). Resource distributions within sets of social relationships therefore represent a person's or group's relative position towards other persons or groups (Sen, 1985) and can be seen as a bargaining problem through cooperation (adding to total resources and services) and conflict (distribution of the total resources and services), or cooperative conflict (Sen, 1987). Therefore, as Pritchard *et al.* (2014) rightly argue, food security in India is an issue related to the rights, freedoms, and capabilities of marginalised people rather than about food itself.

Originating in game theory, a bargaining approach considers interaction through cooperative conflict within relationships, such as a household, community, or village, in which the outcome depends on respective bargaining powers (Agarwal, 1994). Sharma (1980) writes that identifying how women exercise power within the household is difficult, but the domains in which women can and cannot exercise power are telling for their status. Ownership of property or other assets is one important factor that influences bargaining power (Agarwal, 1997). Since women generally spend a larger part of their income on household expenditures compared to men (Allendorf, 2007; Meinzen-Dick *et al.*, 1997; Quisumbing *et*

al., 1995; Rao, 2006; Rao, Pradhan and Roy, 2017; Sraboni *et al.*, 2014; Wiggins and Keats, 2013), increasing women's bargaining power through landownership would benefit household food security (Agarwal, 1994; Das *et al.*, 2013; Doss, Summerfield and Tsikata, 2014; Thomas, 1990). According to Jane Guyer (1988 in Kevane, 2000), gendered preferences in income allocation are not the result of inherently different values among men and women, but the result of their structurally different situations. The social anthropologist Ann Whitehead (1990) emphasised that social categories, for example rural women, are heterogeneous and experiences of food production, access, and responses to food problems differ even within such social categories.

Considering that landownership is only one arrangement through which a social actor can obtain access to land, an analysis of the influence of women's landownership on bargaining power and household food security paints only a limited picture. Therefore, this study provides an in-depth understanding of the interactions between access to land, gender, and household food security. The bundle of rights metaphor helps to analyse how a social actor's accumulation, or bundle, of rights regarding various landed properties translates into bargaining power. While some scholars argue that resources in control of women benefit the entire households more compared to control by men, gaps in knowledge and lack of clear evidence remain (Doss, Summerfield and Tsikata, 2014; Santos *et al.*, 2014). Studies located in India focus either on women's landownership (e.g. Agarwal, 1994) or on food security (e.g. Mitra, 2014), on women's landownership and household food security (e.g. Rao, 2006; Santos *et al.*, 2014), or on linking agriculture to food security (e.g. Gillespie, Harris and Kadiyala, 2012; Sraboni *et al.*, 2014), but to my knowledge there are no studies that focus on the role of different arrangements of access to land, including gendered dimensions of access, on household food security in South India.

Aims, Goals, and Objectives

The aim of this study is to investigate the links between access to land, gender, and household food security in rural South India. This research has four objectives. First, to identify how social units obtain access to land and how gender plays a role in obtaining access to land, second, to investigate how households perceive and identify their own command over food, food problems, and food choices, third, to investigate the role of access to land in command over food, and fourth, to gain an understanding of intra-household decision-making regarding land and food. The goal is, through ethnography, to get a clear, in-depth understanding of local practices, beliefs, and behaviours in relation to access to land and command over food in one village in Salem District, Tamil Nadu. Topics of interest include the practices through which households obtain access to land, the various types of access that exist in the research location, land inheritance practices, intra-household decision-making and resource allocations, household food acquirement, consumption, and preferences, and gender relations.

This study has three major contributions. First, it contributes to existing literature that investigates the links between access to land and food security in India. While the greater part of the existing literature concentrates on landownership, this research widens the scope to include arrangements of access to land

that are not characterised by ownership. Second, this research contributes to knowledge generation that addresses the ambiguous relationship between women's landownership and household food security. This knowledge results from an exploration of the various arrangements of access to land, unpacking the rights derived from these arrangements, and investigating the contributions of these rights in command over food. The third contribution is to the development of three theories used to analyse property relations and command over food, by highlighting the strengths and the weaknesses of these theories and adapting them for property relations that include but are not limited to ownership. These three theories are the entitlement approach, the bargaining approach, and a bundle of rights metaphor.

To achieve the aim and objectives of this study, I frame the empirical data analysis against the entitlement approach and related bargaining approach and the anthropological theory on property through the bundle of rights metaphor. These theories are further developed to understand the inter- and intra-household property relations and command over food and answer the following research questions:

1. What is the impact of gendered social practices on access to land in rural South India and why?
2. What is the role of access to land in household food security and why?

These research questions prompt three key concepts; access to land, gender, and food security. Access to land is a concept denoting the ability to benefit from land, whether the beneficiary owns the land or not. In this dissertation I use landownership to refer to legally recognised private property rights in arable land, landlessness to refer to the absence of legally recognised private property rights in arable land, and access to land to refer to the ability to benefit from land, either through ownership or through other informal land access arrangements. Landless households thus do not own arable land but may nevertheless have access to arable land to cultivate. For food security I rely on the definition agreed upon during the World Food Summit 1996; "when all people, at all times, have physical and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life", and combine this with the four pillars of food security; food availability, accessibility, utility, and stability. Gender refers to the social construction of what it means to be a man or a woman. This includes beliefs on appropriateness, behaviour, capabilities, and authority. Gender differs from sex, as the latter refers to biological, physiological, and physical features. Albeit gender is a spectrum, I refer to comparisons between women and men, brothers and sisters, and wives and husbands in this dissertation in accordance with local social practice.



The research conducted for this dissertation is part of a collaborative research project between the University of Hertfordshire and Periyar University, funded by UK-India Education and Research Initiative (UKIERI). This collaborative research project, titled 'Access to Land: The Implications of Customary and Private Land Rights for Food Security', drew my attention because of the links with my previous research

on women's participation in agriculture in rural West-Bengal. This previous research project in West-Bengal concentrated on topics related to gendered landownership, control over land and cultivation, and intra-household decision-making processes; topics I could easily transport to the UKIERI-project for my PhD research. While my experiences and interests from the research in West-Bengal initially directed my PhD research, immersing myself into existing literature and empirical studies sharpened my focus and research aim for the current study. Data collected by the UKIERI research team resulted from a household survey conducted among 1000 households, of which 103 in Katuyanur, the research location of this dissertation. However, the empirical chapters rely primarily on data collected through ethnography, using the research tools of participant observation and in-depth semi-structured interviews. I spent six months in the field, half of which travelling back and forth between the villages, the university, and the university hostel I was staying at, and the second half I spent living with a family in Katuyanur.

The main findings resulting from this research are 1) women rarely own land but are unconcerned by their lack of landownership; households' struggle for a sustainable livelihood, which includes sufficient command over food, results in women's views that the intra-household distribution of landownership is insignificant, except in circumstances of a household break-up because of divorce or widowhood. Intra-household bargaining over land rarely takes place because an intra-household transfer has little impact on the intra-household allocation of resources due to the generally cooperative nature of household management. This finding affects the usefulness of the bargaining approach for analysing links between women's landownership and women's intra-household bargaining power, especially for poor rural households. However, landownership is crucial for women in circumstances of relationship breakdown, for example due to widowhood or separation, because landownership increases her economic position. Precisely because of the importance of landownership for women in such circumstances, women do not bring their relationships to the point of breakdown by bargaining over an intra-household transfer of landownership; 2) hunger and starvation are not prevalent in the research area because of the food rations provided through the Public Distribution System. However, households lack dietary diversity, and nutrition and food preferences are luxuries beyond households' reach; 3) households depending on agricultural wage labour as main source of livelihood are most vulnerable to food insecurity. Agricultural wage labour is an insecure labour-based entitlement relation due to inadequate availability of agricultural wage labour, a gendered division of agricultural labour and gender wage gap, and a lack of accessibility to non-agricultural employment; 4) landless households with non-agricultural livelihoods are less vulnerable to food insecurity than marginal and small farmers. Households' limiting factor for obtaining sufficient command over food is income and non-agricultural sectors are better paid compared to the agricultural sector. This finding has important implications for women for whom non-agricultural employment is inaccessible; 5) the bundle of rights derived from access to land is not found to predict vulnerability to food insecurity, but it does determine how land can contribute to household food security and it determines farmers' opportunities to invest in cultivation. While Dreze and Sen (1989) and Osmani (1993) argued that

a household's entitlement set can only change when there is a shift in their endowments or in E-mapping, this study shows that such endowments are not restricted to owned assets, but also include access to assets without ownership and a change in the arrangement of the access, i.e. a change in the bundle of rights, can also cause a shift in a household's entitlement set; 6) landownership does not equal control over land; women who own arable land have little influence over land management while women with (temporarily) absent husbands have more control over land management despite not owning the land. An intra-household transfer of landownership does not result in a shift in control over land; 7) intra-household allocation of food is equal in type of food and based on need and preference in quantity of food. No evidence is found to indicate that specific household members consistently consume insufficient amounts of food or less diverse food compared to other household members. Therefore, there is no evidence to support a link between the intra-household distribution of landownership and intra-household food allocation.



This dissertation is structured into three parts. The first part, Chapter 2, 3, and 4, provide the background to the empirical chapters with a literature review, an introduction to the research location, the local context, the research population, and the methodology. The second part, Chapter 5, 6, 7, and 8, presents the empirical chapters, and the third part, Chapter 9, is the conclusion in which I bring all chapters together to answer the research questions.

Chapter 2 provides a literature review on gender relations, food security, and access to land. The key concepts and theories will be discussed, explained, and connected into an analytical framework that will be applied in the empirical chapters. The chapter starts with a discussion on gender relations and the position of women, specifically within the household. Theories on how to approach intra-household allocation of resources are reviewed, from a unitary perspective to cooperative models in which resource allocations take place through bargaining. This study is ultimately interested in household food security, and thus the concept of food security and its main characteristics are discussed in this chapter. The importance of access to land in household food security is clarified as well as the limitations in current knowledge as most literature focusses only on a narrower concept of landownership. This is followed by a detailed discussion on the three theoretical approaches used throughout this dissertation to analyse the empirical data presented in the chapters that will follow. The entitlement approach focusses on the role of assets in social inequality, ultimately influencing command over food, and this approach will be compared with the very similar extended entitlement approach and a theory of access. The bargaining approach is used to understand interaction among social actors and how this interaction influences resource allocations. As the entitlement approach was intended to include only assets based on private ownership, a bundle of rights metaphor is added to the theoretical framework to recognise and understand the

diversity of property relations and access to land. Chapter 2 concludes with a recap of the key concepts that will be used for the data analysis and the analytical framework is introduced.

Chapter 3 covers a discussion on the research location, starting with an overview of background information on Tamil Nadu, followed by a more elaborate overview on Salem District, the area in which this research is located. This background information includes data on demographics, the dynamics around agriculture as livelihood, and social and economic development. This is followed by a discussion on kinship and gender relations specific to South India to provide a more in-depth and specific research context. As access to land is one of the key topics in this dissertation, the discussion then moves to access to land in India, which includes a brief discussion on the history of land registration in India, specifically in South India from the 16th century onwards, and a discussion of inheritance law in India and Tamil Nadu. An introduction to the historical development of land registration relates to the argument made later in this dissertation that the current registration, of landownership, is too narrow to recognise the diversity of access to land that still exists in South India today. Landownership is associated with particular communities and with men. The majority of landowning farmers in India are smallholders who struggle to achieve sustainable livelihoods, while landholdings continue to decrease in size. India's government has initiated policies and laws aimed at equal landownership among caste and among men and women, but the literature presented in this chapter provides evidence that India is still far removed from achieving this goal. Before going into the specifics of the village where this research took place, the chapter turns to the current status of food security in India on the level of households and to households' ability to command sufficient food provisions. This includes a discussion on the state of nutritional health and food security in Tamil Nadu, making distinctions based on caste and gender. This is followed by a brief overview of India's food policy. The last part of this chapter provides information about the village of Katuyanur, particularly in relation to its geographical location, how families settled in the area, the land transactions that took place from ST households to Backward Classes (BC) and Most Backward Classes (MBC) households, the current composition of the village in terms of caste and landownership, the changes of the landscape in the last four decades, and social organisation in Katuyanur.

Chapter 4 contains the methodology that formed the backbone of the research. With ethnography as research method, the particular research tools applied were those of participant observation, semi-structured in-depth interviewing, and a household survey. This chapter explains the preparations made before the start of data collection and experiences and reflections from the field. This includes the method of selection of the research location, which started in the United Kingdom and was refined in the field. While the household survey covered multiple villages within Salem District, ethnography concentrated on one village as research location. Chapter 4 continues with a description of how I gained access to the research population and how I selected my informants. The final sections of Chapter 4 include a reflection on the chosen methodology, on the experiences in the field, on the influence of my social positions on the

collected data, and on the validity, reliability, generalisations, and limitations of the research and research findings and a section on research ethics.

Chapter 5 is the first empirical chapter, using the extended entitlement approach to investigate how land endowments are obtained and the caste- and gender-based patterns of access to land in Katuyanur. This investigation includes discussing the various existing arrangements of land access and demonstrates how a 'bundle of rights' applies to access to land. A holistic approach to property relations should thus combine an extended entitlement approach with a bundle of rights metaphor to understand not only the mechanisms at play in obtaining access to land, but also to understand what bundles of rights are derived from this access, as different bundles are open to different social actors. The chapter starts with the meanings and values attributed to land by Katuyanur's inhabitants, which supersede attitudes that the land market determines the value of land. Understanding people's connections with land, as a two-way link between land and social identity, representing memories and familial continuity, is important for the argument made later in this dissertation that livelihood decisions are not always rationally made with the purpose of maximising economic status. The chapter continues to explore landownership distributions within the village of Katuyanur, paying particular attention to caste and gender. Findings show that landlessness only exists among SC and ST households, ownership over arable land is concentrated among men, regardless of caste, and housing plots among ST households are more likely to be owned by women. Land is most often obtained through inheritance, except for women. Discriminative inheritance practices are the primary reason for women's lack of ownership over arable land. This chapter identifies five reasons why daughters should not inherit land; first, *daughters receive marriage gifts instead of their inheritance share in land*, second, *patrilocal residence makes it difficult for daughters to manage the land after marriage*, third, *after marriage daughters become the responsibility of, and responsible for, her husband and parents-in-law*, fourth, *women prioritise a good relationship with their brothers over land*, and fifth, *landowners do not own enough land to give daughters a (not necessarily equal) share*. These five reasons ensure that bargaining about inheritance between brothers and sisters is uncommon and positions such a bargain within beliefs and perceptions of legitimacy involving a larger social network. Landownership is not the only form of access to land prevalent in Katuyanur. Therefore, this chapter also includes a discussion of various other arrangements of access to land. Even though almost all land in Katuyanur is privately owned land registered by the Government of Tamil Nadu, this property type can be unpacked by identifying the various bundles of rights that various social actors derive from this single category. Doing so reveals the different arrangements of access to land within one theoretical category of property, thus problematising such categorising of property types. Four common arrangements for access to private property are *access to land to use as path*, *access to land for animal husbandry*, *access to land for picking non-cultivated crops*, and *access to arable land for cultivation*. In the latter arrangement, four access mechanisms are found: access through renting or leasing land, access through early inheritance, access through unregistered inheritance, and access through relatives. In this chapter I argue three things.

First, categorising property types into the 'Big Four' obscures the diversity of bundles of rights existing across these four categories and overturning this categorisation also means that the five rights identified by Schlager and Ostrom (1992) can be applied to property types other than common property. Second, the 'fuzziness' of property relations, i.e., the various bundles of rights that can be derived by different social actors from access to land, facilitates bargaining over access to land and over rights derived from this access. Third, the bundle of rights recognises hierarchies in bundles of rights but does not recognise the possibility of hierarchies within specific rights of a bundle. However, an apparent identical bundle of rights may in fact not be identical, as certain rights in a bundle may be temporal, hierarchical, conditional, or with restrictions.

Chapter 6 investigates household food security in Katuyanur by focussing on the four pillars of food security: availability, accessibility, utility, and stability. In this chapter I argue that food security from the perspective of rural peoples is an issue of income and livelihood. Food security/food insecurity is not a dichotomy; it is a spectrum with severe food security on one side and food security on the other with seasonal changes along this spectrum. Therefore, I study food security from the view of informants' perceptions, experiences, behaviours, and preferences instead of measuring or scaling food security. Even though individual household members' perceptions, experiences, behaviours, and preferences regarding food access and problems might differ, Chapter 6 focusses on the household from a cooperative perspective in pooling food resources. I study the pillar of availability through the village's proximity to food markets, the availability of wild foods for gathering, and the local availability of staple foods. The introduction of rice in local diet is found to have positively influenced food availability. One entitlement that substantially increases food availability for households are the food rations offered through the Public Distribution System (PDS). The food rations households receive through PDS help households in managing their food consumption when they cannot obtain enough food through the market. Simultaneously, those households who depend on PDS for their daily food intake lack variation and nutrition in their diet. Accessibility of food depends on a multitude of factors, such as choices, preferences, and behaviour. Two households with identical food consumption patterns may have different perceptions on the accessibility of food. I investigate households' perceptions, vulnerability to food insecurity, and behavioural responses to vulnerability and shortage using nine food access questions from the *Household Food Insecurity Access Scale (HFIAS) for Measurement of Household Food Access: Indicator Guide (v. 3)*, (Coates et al., 2007). The findings in Chapter 6 demonstrate that households depending on agricultural wage labour for their livelihood are most vulnerable to insufficient command over food, and most villagers consider consumption according to food preferences a luxury. This chapter shows that households whose livelihoods are in non-agricultural sectors are more food secure, even compared to households with access to land for cultivation. This chapter investigates the behavioural strategies in place to cope with insufficient command over food. The major coping strategies include compromising on food quality, compromising on food variety, and getting loans or borrowing money to buy food. I discuss food utility based on access to

clean water, access to sanitation and healthcare, and access to safe and nutritious food. I discuss food stability through the interrelated factors of agricultural-market stability, ecological stability, and livelihood stability. The agricultural sector does not provide a sustainable livelihood because of lack of stability throughout all three factors.

Chapter 7 investigates the links between access to land and households' command over food. The entitlement approach is used to analyse how command over food depends on the endowments that household have. The links between land and food relate to two of the four entitlement relations identified by Sen (1981); production-based entitlements and own-labour entitlements. In this chapter I argue that access to land does not necessarily contribute towards household food security. Rather, the contribution depends on size of land, access to irrigation facilities, other sources of livelihood available, and access to credit for investment in cultivation. In this chapter I discuss not only access to arable land, but also access to land for animal husbandry and pastoralism because livestock is both a source of income and a source of food. The contribution of access to land to household food security depends on the bundle of rights derived from that access. The Government of India and various financial institutions consider being a farmer synonymous with being a landowner, therefore, only *patta* holders can apply for various agricultural schemes, benefits, subsidies, and loans, thus excluding the many farmers who do not have any arable land registered to their names. Command over food can also be obtained through own-labour entitlements, which is especially important for households who do not have access to arable land, and who therefore cannot command food through production-based entitlements. Own-labour entitlements can be exchanged for wages, which in turn can be exchanged into command over food, and hunting and gathering is also an own-labour entitlement, which directly results in command over food. In the research location, all households who lack production-based entitlements and who rely solely on selling their labour for command over food belong to ST and SC communities. The gendered division of labour causes great discrepancies between men's and women's opportunities to translate their labour into command over food.

Chapter 8 investigates how intra-household bargaining plays a role in household food security, in intra-household allocation of food resources, and in intra-household allocation of access to land and bundles of rights. In this chapter I argue that a woman's bundle of rights is weaker than her husband's, even for women who own land, as the bundle of rights is closely associated with a gendered division of labour. I explore intra-household bargaining power in terms of decision-making power over income allocation, control over land, labour allocation, and intra-household food allocation. While household members consider land a household asset, using a bundle of rights metaphor to unpack the relationships between household members and their land, it becomes clear that women have little say in cultivation decisions, i.e., women rarely hold a bundle of rights that includes management. This chapter presents evidence that indicates that contribution to labour invested in the land does not equal the weight of contribution in decision-making, although women whose labour contribution is the only contribution

because of (temporary) absence of husbands do have greater control, greater management rights, over land. Women's landownership, however, does not relate to land management. Decisions on individual household members' labour allocation are predominantly made by men. This holds true for their own labour allocation, and for the labour allocation of their spouses and children, particularly sons. The income resulting from paid labour is pooled within the household, although not all household members (equally) participate in decision-making for income allocation. Bargaining about income allocation is uncommon. Mainly because of the low total incomes, households have little decision-making freedom on income allocation since most of the income is allocated to basic needs and repayment of outstanding debts. The variation in income allocation from one month to the next is almost non-existent, and therefore bargaining rarely takes place. If total incomes would increase, bargaining about income allocation would likely also increase. Most households depend on the market for food. The division of responsibilities within the household regarding food preparation, which includes buying cooking ingredients, demonstrates women have greater control over this aspect of food security. At the same time, women do not have full control over every aspect of food preparation, nor is it an aspiration as increased control would increase their workload. Informants consider the allocation of food among household members equal or according to needs and preferences. No specific household member consistently eats less when food is short. However, data indicates women are less consistent in the number of meals they have in a day as that depends on their day's workload. In households with children of school age, parents put their children's food needs and preferences first.

Chapter 9 concludes this dissertation by discussing the main research findings and arguments, discussing the implications of these findings for the three theories used in this dissertation, and answering the two research questions. The final section of this chapter presents a reflection on my PhD process, experience, and learning.

Chapter 2 - Access to Land and Food Security

This research aims to investigate the links between access to land and household food security. More specifically, the interest of this study is in household food security and intra-household resource allocations by focussing on the gendered dimensions through which arrangements of access to land contribute to command over food. The previous chapter introduced a discussion on gender- and caste-based patterns of access to land and the current worrisome state of household food security in India. The current chapter reviews the literature regarding concepts and theories around food security and access to land.

Food security is a socio-economic issue and access to land is an important variable for rural households' command over food. The theoretical perspective this research adopts to study the links between food security and access to land consist of three existing theories: the entitlement approach, a bundle of rights metaphor, and a bargaining approach. The entitlement approach is used to analyse the possible links between access to land, which refers to the ability to benefit from land, and food security. To unpack the specificity of arrangements in access to land, a bundle of rights metaphor is applied to analyse property relations. The entitlement approach assumes clear and direct links between endowments and entitlements instead of considering the temporality and situatedness of the links in which social units need to make decisions on which links to utilise at different moments in time under different circumstances. The bargaining approach addresses this process of decision-making. The allocation of resources between social groups is based on often discriminatory social norms and vested in unequal power relations, resulting in inequality of resources between social groups. Intra-household resource allocations through bargaining depend on household members' relative bargaining powers. Endowments can strengthen a bargaining position, but so can entitlements, for example income derived from own-labour. The key concepts I draw upon to apply these theories are access, bargaining, bargaining power, bundle of rights, decision-making, endowments, entitlements, fall-back position, food security, and gender relations. Each of these theories and concepts is important and complex and could be an entire thesis on its own. The consequence of dealing with many of these complex theories and concepts in one literature review results in a somewhat selective discussion as the focus on each concept in this chapter is narrowed down to only those aspects directly related to the main interests of this study.

Intra-household resource allocation and access to land are based on several factors. Gender as a factor will be dealt with in the first section, section 2.1, of this chapter. The following section, section 2.2, discusses the concept of food security, how the concept of food security stands in relation to the concept of food sovereignty, and discusses the relevance of studying food security within the household. Section 2.3 addresses the concept of access to land, the importance of land in the context of food security, and the relations between women and access to land. The three theories to study food security and access to land are discussed in section 2.4 and are combined into an analytical framework in section 2.5, which will be applied to the empirical chapters to analyse the collected data.

2.1 Gender Relations

Considering the crucial role of gender in access to land and in food security, an understanding of gender and gender relations is vital. Gender refers to social notions of femininity and masculinity (Momsen, 2019; West and Zimmerman, 1987), which are flexible, go beyond simple dichotomies of heterosexual men/women (Momsen, 2019), and are defined differently in different societies (Yanagisako and Collier, 1987). At the same time, societies often perceive gender as fundamental and enduring differences between men and women rooted in biology (West and Zimmerman, 1987). However, gender is not the same as sex, as the latter refers to biological criteria defining males or females (West and Zimmerman, 1987). Although biological differences between men and women exist, structural and cultural processes construct social inequalities between men and women (Yanagisako and Collier, 1987). Gender is thus a social construct of which the specifics can differ from one society to the next.

Gender is produced and reproduced through everyday social interactions and activities (Lorber, 1994; West and Zimmerman, 1987) and constitutes expectations of how men and women should act, dress, and speak, although these usually remain unnoticed until these expectations are disrupted or transgressed (Lorber, 1994). These expectations are not static but rather a continuous and dynamic process in which appropriate gendered behaviour changes over time (Deutsch, 2007). The expression of gender, or 'doing gender', is situated in individual interactions as well as social institutions (West and Zimmerman, 1987). Gender is fundamentally social in character; gender is created through interaction within social relations and simultaneously creates other social relations (Andersen, 2005; Deutsch, 2007). Gender relations thus constitute the socially constructed relations between men and women (Momsen, 2019) which are frequently, but unjustly, analysed within dichotomies such as public/private, culture/nature, and production/reproduction (Yanagisako and Collier, 1987).

Gender is a social structure, but also involves agency to follow or resist gender expectations (Andersen, 2005). Joan Scott defined gender as "a constitutive element of social relationships based on perceived differences between the sexes, and a primary way of signifying relationships of power" (Scott, 1988 in Kandiyoti, 2005, p. 148). Kandiyoti (2005) emphasises that this definition shows that power is not only present within gender relations, but that power and gender are relevant in any relation, even when it is not directly about gender. The importance of power is also stressed by Cornwall (2003), who argues that gender is too often confused with women's issues and gender relations with men-women relations instead of gender being considered as an important element of power in any social relationship. Social structures generate power relations, in which gender is crosscut by race, age, caste, ethnicity, class, religion, culture, and disability (Andersen, 2005; Mohanty, 1984; Momsen, 2019). Mohanty (1984) therefore stresses that the category of women is heterogeneous and not simply a binary division between Western and non-Western women, and Deutsch (2007) argues that studies should focus on the differences in gender

equality, not only over time, but even within a single society, to break down the constructed dichotomy between men and women.

While early discussions saw institutions as gendered, current perspectives consider gender itself an institution (Andersen, 2005). Gender is thus not so much an individual characteristic but the outcome and foundation of innumerable social arrangements (West and Zimmerman, 1987). Gender, as a social institution, organises society through a division of labour, the allocation of goods and resources, responsibilities of care, legitimate leadership, and common values and the transmission thereof to new members (Lorber, 1994).

2.1.1 Kinship and the Household

Gender relations are largely generated and maintained through kinship, relationships within the household, and relationships beyond the household (Hartmann, 1981; Kevane, 2000). Kinship provides “the organizing principles that govern the recruitment of individuals to social groups and their placement in them, the formation of the family and the household, residence at marriage, resource distribution including inheritance, and the obligations and responsibilities of members of the group in the business of living” (Dube, 1997, p.5). Dube (1997) argues that kinship is an important factor in shaping and legitimising membership of a family, access to productive resources and food, and authority and decision-making. However, Arumugam (2020) points out that kinship is not only about social organisation, but is also an experiential and emotional aspect of everyday life.

Gender and kinship are distinct, but mutually constructed (Yanagisako and Collier, 1987) and kinship reflects and reinforces gender differences (Lorber, 1994). For one, kinship systems largely determine access to resources; decision-making authorities and gender relations provide context for resource allocations and maintenance of gender ideologies (Dube, 1997). People may use their kin-network to gain access to resources, but they simultaneously act as part of a gender category which directs the gendered division of labour and thus determines the limitations of the resources they can access and control (Hartmann, 1981). Access to resources thus depends on a combination of kinship and gender.

Identifying and understanding relations within households is complicated since “households are never neatly bounded, but rather consist of interacting individuals who are also member of other social groupings” (Pottier, 1999, p.18). Additionally, Sharma (1980) argues that a household is not only a kin group, but simultaneously an economic group. Similarly, Hartmann (1981) argues that the family is a location of production and redistribution rather than solely a unit based on kinship. Consequently, a house does not always identify the boundaries of a household, as an economical unit may live in separate buildings or several economic units may exist within one house (Busby, 2000). Furthermore, households, and economic links between households, are not stable as they may change over time or situation (Busby, 2000). Intra-household relations are thus shaped by kinship but are simultaneously temporal and situational.

2.1.2 Gendered Division of Labour

Gender roles refer to the tasks and types of labour assigned to men and women within the household and outside the household (Lorber, 1994; Momsen, 2019). Gender roles thus refer to behavioural aspects of men and women (West and Zimmerman, 1987), which are learned and enacted (Lorber, 1994). Gender roles are flexible, increasingly so with economic development, and differ from one society to the next (Momsen, 2019). An in-depth study of gender roles in societies can lead towards social and economic change such as gender equality, sustainable livelihoods, and increased nutrition (Kumar-Range, 2001). Goody (1976) associates women's status with the gendered division of labour. However, as Moore (1988) rightly points out, difference and asymmetry are not necessarily synonymous with inequality and hierarchy. This suggests that a gendered division of labour is not inherently a sign of gender inequality.

While strict boundaries between types of work are blurred, there are gendered patterns in which women tend to do more unpaid household work compared to men (Lorber, 1994). Household work includes domestic production of food, clothes, and shelter; production for which no wages are received but have 'use-value' (Lorber, 1994). The gendered responsibility of unpaid household work is a matter that directly relates to the topic of this dissertation as it interferes with opportunities to exchange own-labour entitlements into wages. Modernisation in agriculture changed the gendered division of labour in which women have become more dependent while their workload has simultaneously increased (Momsen, 2019). Brines (1994) writes that some evidence suggests that the division of household labour has changed, but not nearly enough to result in an equal division of household labour between men and women. Other scholars argue that women's responsibility for household labour is not diminished at all, even when women's contribution to the household income is equal to men's contribution, and sometimes women's household labour responsibility is even exacerbated when women earn more than men (Brines, 1994; Deutsch, 2007). Women's double or triple burden of household work, childcare, and paid labour results in women working longer hours and having less leisure time compared to men (Momsen, 2019). One perspective on the division of household labour is that economic dependency and household work are considered feminine, while contributing to household income and leaving household work to others are considered masculine (Brines, 1994). Brines (1994) argues that in such a view, the division of household labour reproduces gender.

Paid work is also gendered and those occupations associated with men are generally better-paid, of higher-status, come with more benefits such as health insurance, and are more adventurous compared to occupations associated with women (Lorber, 1994). Entry into paid labour is for women not always accompanied by a rise in social status as the entry can also be the result of deprivation and therefore be associated with low social status (Rao, 2014). Furthermore, when gender barriers within certain areas of labour crumble, gender differences may be re-created rather than disappear (Deutsch, 2007). The gendered division of labour directly results from gender ideologies that evaluate men's and women's labour differently (Spring, 2000). Household work (paid as well as unpaid) is nowadays associated with low

status (Lorber, 1994) and reproductive tasks allocated to women receive less recognition and visibility compared to tasks assigned to men (Rao, 2014). With the importance of own-labour as endowment in exchange entitlements to obtain sufficient command over food, the value assigned to different labour types is incredibly relevant to this dissertation. Kabeer (1997) found that gender ideology resulted in women's continued responsibility for the household and for childcare, and even after women started employment outside the house the division of this work was not re-negotiated. A gendered division of labour thus may not inherently mean inequality or hierarchy, but inequality and hierarchy do largely influence a gendered division of labour.

2.1.3 Resource Access

Access to resources is often based on perceived needs, especially within the household (Moser, 1993). These needs are directly linked to gender, for example, women often receive their food last and receive less, receive new clothes less frequently, and have fewer luxuries (Moser, 1993). Furthermore, landownership is patterned by gender, as is access to agricultural training and modern inputs (Momsen, 2019). Women's participation in (land, labour) markets is lower compared to men, not because of direct restrictions, but because women often have less money to spend, fewer political connections, and less other necessary resources to participate in markets (Meinzen-Dick *et al.*, 1997), in addition to the gendered division of labour in which women are solely responsible for all unpaid household work, as discussed in the previous section.

Property relations are closely connected to kinship and social organisation (Dube, 1997; Turner, 2017), with patterns of property inheritance varying according to society, caste, religion, community, and region (Velayudhan, 2009). Although links between gender relations and use of natural resources are incredibly diverse, some common trends are nevertheless identifiable (Meinzen-Dick *et al.*, 1997). One such trend is that the perception of men as the head of the household, a perception persistent not only within communities but also with government officials, statistics, and processes, lies at the heart of gendered land titling (Velayudhan, 2009). Furthermore, norms held within communities regarding appropriateness for women could be the utmost barrier preventing women's access to resources, especially independent rights (Meinzen-Dick *et al.*, 1997). According to Goody (1976), women's marriages are more strongly controlled if women receive property, either as part of their inheritance or their dowry. However, women's marriages in India are tightly controlled (Dube, 1997), while women are simultaneously denied rights to own or control land (Velayudhan, 2009) and only have access to resources such as land through men, while the latter usually have access independently (Moser, 1993). Thus, while men and women generally both have access to resources, this access is different in kind and quantity (Moser, 1993).

2.1.4 Intra-Household Decision-Making

Intra-household decision-making influences resource allocation. As mentioned in Chapter 1, women are more likely to spend their income on household expenditures compared to men. Gendered intra-

household relationships of decision-making are not only about spouses, but also about brothers and sisters, daughters-in-law and fathers-in-law, fathers and daughters, and mothers and sons. Kenney (2006) describes six types of household management, based on whether they pool all their income or (partly) keep separate incomes and depending on who has control over spending the income for the household; women, men, or equal control. Kenney (2006) found that among US couples, the incidence of pooled income controlled by men was greater among Asian-origin women compared to any other ethnic group. Gender inequality and women's oppression is, unlike other characteristics such as caste, class, and ethnicity, often incurred on a daily basis within the home (Deutsch, 2007). At the same time, the home can also be a site where women can exercise power (Deutsch, 2007). Understanding power relations within the household has been at the forefront of studies into intra-household decision-making patterns (Chakrabarti, 2019) and will be discussed further in section 2.4.3, as decision-making can be seen as a proxy for bargaining power. Status within a family or household is embedded in kinship, intergenerational relationships, and family structure (Chakrabarti, 2019). Leacock (1978) argues that "women's status is dependent, not on their role as mothers nor on their confinement to a 'domestic' sphere, but on whether or not they control 1) access to resources, 2) the conditions of their work and 3) the distribution of the products of their labour" (Leacock 1978 in Moore, 1988, p. 31-2). Simultaneously, women's status is not static or fixed, but changes throughout the life cycle (Chakrabarti, 2019).

Deutsch (2007) refers to Chafetz (1990), who argued that women's increased access to job opportunities results in women's decreased dependency on men. In turn, this economic independence results on a micro-level in women's increased intra-household bargaining power, and on a macro-level in challenging gender definitions and differences (Deutsch, 2007). Kenney (2006) found that for US couples, women's control over joint or separate household income increased when women's income contribution increased. In a similar vein, Duflo (2012) argues that women's lack of independent income negatively impacts their intra-household bargaining power. McElroy (1997) writes that women's increased economic independence relates to increased welfare within the household, but is only visible in long-term decisions, such as allocation of labour, fertility, health, and children's human capital. However, Rao (2014) argues that labour participation and economic contribution are not the only factors involved in decision-making as factors such as stage in life cycle, education, supportive state policy, earlier work experiences, reproductive success, and local gender ideologies also play an important role. For example, women's independently earned income is usually spend entirely on the household, as women are expected to do so (Dube, 1997). According to Chakrabarti (2019), decisions are not always made by the same person but varies according to the importance given to the decision. In addition, areas of decision-making are often divided between men and women according to their respective responsibilities (Rao, 2014). Kabeer (1997) therefore refers to the division of household labour as an area of 'non-decision-making'. Intra-household decision-making is thus heavily dependent on gender ideologies and the gendered division of labour, but that does not mean that decision-making patterns do not change.

2.1.5 Intra-Household Resource Allocation

Decision-making regarding resource allocation within households is not always equal among all household members. Intra-household resource allocation, whether labour, income, or other resources, depends on the organisation of the household and the gendered division of labour (Moore, 1988). Theories on resource allocation within the household developed in reaction to the view that the household acts as one (Haddad, Hoddinott and Alderman, 1997; Thomas, 1990). This view, the unitary model, assumes pooling of resources and distribution of resources among household members are not necessarily equal, but the preferences regarding the distribution are equal (Haddad, Hoddinott and Alderman, 1997). Such a unitarian model is what Thomas (1990) refers to as the 'Beckarian model' in which the outcome of allocations is always the same, no matter who controls the allocating process. Such a model therefore has no interest in the processes of control that take place within the household (Blumberg, 1988).

The possibility that household members have different preferences gave rise to collective models for intra-household allocations, broadly categorised into two types: cooperative and non-cooperative models. The cooperative model assumes, like the unitary model, pooling of resources but unlike the unitary model, the cooperative model focusses on the process of allocating resources when household members' interests and preferences towards the allocation of those resources are different (Agarwal, 1994; Das *et al.*, 2013; Haddad, Hoddinott and Alderman, 1997; Hartmann, 1981; Meinzen-Dick *et al.*, 1997). Hartmann (1981) therefore describes a household as both a unity and a disunity; a unity of household members who pool their income and production, and simultaneously a disunity where distribution takes place through struggle based on different (gendered) activities and interests. Blumberg (1988) argues that resource allocation outcomes are determined by who controls, earns, and spends the money within the household, in which gender is crucial. Among the cooperative models there are two approaches, the first considers allocation of resources always directed towards individual maximisation, while the second considers allocations to be subject to a bargaining process (Haddad, Hoddinott and Alderman, 1997; Manser and Brown, 1980; McElroy and Horney, 1981). The cooperative model for intra-household allocations through bargaining assumes that the distribution of resources within a set of relationships such as the household is not equally favourable to everyone within such a relationship; it depends on the members' relative bargaining power (Agarwal, 1994). The concept of bargaining power will be discussed later in this chapter, in section 2.4.3. While both spouses generally contribute to the pooled income, their incomes are often flagged for different expenses (Moser, 1993).

The non-cooperative model does not assume pooling of resources but sees the individual household members as having their own individual economies (Haddad, Hoddinott and Alderman, 1997). Not all bargaining is cooperative. Non-cooperative bargaining assumes selfish social actors who try to maximise their individual outcomes within relationships like the family, even if that leaves others worse off (Balasubramanian, 2013; Heath and Tan, 2020). Non-cooperative bargaining thus seems similar to a cooperative model towards maximisation. However, the two models differ in the rules within the

relationship, as Balasubramanian (2013) explains that non-cooperative bargaining allows opportunistic behaviour and breaking promises, while “cooperative bargaining assumes the existence of binding contracts” (2013, p.612). Intra-household resource allocation thus depends on intra-household relations and processes of decision-making.

Whether a household follows a cooperative or non-cooperative model for resource allocation differs between communities. Cooperation, or pooling of resources, is according to Clark-Decès (2014) characteristic of Tamil patrilineal families. Some studies argue that the Indian household is characterised by non-cooperative bargaining because bargaining outcomes are not necessarily efficient, i.e. alternative outcomes can result in a greater gain for at least one member without reducing the gain of others (Balasubramanian, 2013; Heath and Tan, 2020). Munro *et al.* (2014) find such inefficiencies in intra-household allocation in North Indian households as well as South Indian households, but on a larger scale among the latter. Simultaneously, Fiala and He (2017) argue that not all household conform to a single model for intra-household allocations but that various models can be found alongside each other. This suggests that processes of intra-household resource allocation do not only differ between communities but also between households within a single community.

2.2 Food Security

Intra-household resource allocation relates to household food security. But what is food security? Scanlan (2003) considers food security, like famine, a process that emphasises inequality rather than an event. Gendered dynamics and social inequalities based on race and class contribute to food insecurity (Scanlan, 2003; Stevano, 2019). The definition of food security, as provided in Chapter 1, was formulated during the World Food Summit in 1996 and refers to “when all people, at all times, have physical and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life” (Santos *et al.*, 2014, p.861). This definition does not specify a level of study and has been studied cross-nationally (Scanlan, 2003; Smith, Alderman and Aduayom, 2006), nationally, locally (Choudhary, 2015; Sahu, Chüzho and Das, 2017; Sharma, 2019), on the level of the household (Harris-Fry *et al.*, 2017; Maxwell and Wiebe, 1999; Sharma, 2019) and of the individual (Harris-Fry *et al.*, 2017). Food insecurity refers to a lack of food security (Campbell, 1991; Maxwell and Wiebe, 1999). The focus in this study is on the level of the household and of the individual.

Food security as a concept is complex and emphasises structural factors that include not only availability but multiple dimensions (Sahu, Chüzho and Das, 2017; Scanlan, 2003). Food security is based on four interrelated pillars: availability, accessibility, utility, and stability. The pillar of food availability refers to sufficiency in quantity of food, acquired through production, local markets, and food aid (FAO, 2006). The pillar of food accessibility includes opportunities for food production, but also through exchanging commodities or services for food (Maxwell and Wiebe, 1999). The pillar of utility relates to health and includes “adequate diet, clean water, sanitation and health care to reach a state of nutritional well-being” (FAO, 2006, p.1). The fourth pillar, the pillar of stability, entails that social units “must have access to

adequate food at all times. They should not risk losing access to food as a consequence of sudden shocks (e.g., an economic or climatic crisis) or cyclical events (e.g., seasonal food insecurity)” (FAO, 2006, p.1). These four interrelated pillars are applicable to each aforementioned analytical level (Berry *et al.*, 2015; Sahu, Chüzho and Das, 2017; Scanlan, 2003; Sharma, 2019) and simultaneously indicate that the household has become an important unit of analysis, rather than only the nation, when it comes to food security (Maxwell and Wiebe, 1999).

There is no universal method to measure food security; some studies use calorie consumption data (Tandon and Landes, 2011) while others use income levels (Mitra, 2014), households’ self-reported perceptions on their food security, or dietary diversity (Rammohan and Pritchard, 2014). Smith, Alderman and Aduayom (2006) divide food (in)security indicators into indicators of diet quantity and quality, but they acknowledge that these indicators do not consider future vulnerability, intra-household allocations, food safety, and food preferences, all important aspects of food security.

Food security is one of the main concepts focussed on in this study, albeit scholars have criticised the concept for being a top-down approach (MacRae, 2016), focussing too much on food production, and being economic and market-oriented (Bala Ramulu, 2016). Food sovereignty, established within activist discourse, was coined as counter-concept presenting a bottom-up approach (MacRae, 2016) with greater autonomy for small farmers (Bala Ramulu, 2016). According to MacRae (2016), the definition of food sovereignty most widely agreed upon is from the first International Food Sovereignty Forum in Nyéléni, Mali, in 2007. The ‘Nyéléni 2007 - final declaration’ defines food sovereignty as “the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems” (Nyéléni, 2007). Debates on food problems polarise between food security, used by international agencies, research institutes, and food corporations focussing on large-scale industrial agriculture, and food sovereignty, used by local organisations, communities, small farmers, and academic researchers focussing on “multiple agricultural systems and food cultures built on the foundation of local ecologies and communities” (MacRae, 2016, p.228). However, Clapp (2014) argues that food security and food sovereignty are politically used as binaries, but as concepts they both try to understand issues of hunger and inequality in food systems.

Considering the different perspectives of the concepts of food security and food sovereignty, this study focusses on food security, instead of food sovereignty, for two reasons. First, food sovereignty is a peasant movement, often advocating farmers’ rights for land, seeds, water, and food (Bala Ramulu, 2016) and food self-sufficiency at the local or household level (Agarwal, 2014), but my study includes rural households who are not farmers, as access to arable land for cultivation is only one form of access to land with a specific bundle of rights, while this study is interested in all forms of access to land common in the research area as well as the various bundles of rights that social actors can derive from this access. Secondly, farmers rarely have enough land for self-sufficiency in food production and rely on the market for food; farmers are producers *and* consumers. Food sovereignty focusses on the work of small-scale food

producers and searches for food systems as alternatives to the large-scale agribusiness (Beriss, 2019), while my focus is on farmers' roles as food consumers with their own strategies for food security, production of food being one such strategy. A focus on food security is not opposing the food sovereignty movement. More specifically, I use food security as a concept and not as part of the mainstream neoliberal agenda on how to achieve food security (Clapp, 2014). By focussing on food security, I do not ignore any of the aspects of people's rights as defined in food sovereignty.

2.2.1 Food Security, the Household, and Women

Food (in)security on the household level depends on poverty, patterns of landholding, quality of land, and sociocultural, legal, and structural factors (Sharma, 2019). In addition, Stevano (2019) found that lack of labour demands, multiple labour engagements, and time constraints are the three most important factors contributing to vulnerability to food insecurity on the household level. The literature on women's role in household food security shows according to Bhandari (2017) four broad economical categories that link women to food security; women's income, women's ability to own assets such as land, women's labour force participation, and women's ability to obtain loans and credit. Besides these economical dynamics, legal opportunities and education are also important categories that link women to household food security (Bhandari, 2017). Thus, household vulnerability to food insecurity depends on many factors, most related to land, labour, and sociocultural factors including gender.

Control over income within the household directly influences the amount of food available within the household (Blumberg, 1988). Thomas (1990) studied family health and nutrition as the outcome of intra-household resource allocations. Likewise, household food security is the outcome of a series of intra-household resource allocations. In their systematic review, Harris-Fry *et al.* (2017) found that women in South Asia receive less nutrient rich foods compared to other household members. Women's generally less advantageous bargaining position compared to men results in women being less food secure. However, Kumar and Quisumbing (2013) argue that in rural Ethiopia, during a food crisis, women of poor households reduce their own food consumption in favour of the other household members. This suggests women choose the well-being of other household members over their own well-being rather than not having enough bargaining power to secure enough food for themselves. Devereux (2001), however, argues that people most vulnerable to death through starvation do not choose this risk, but are chosen by more powerful household members as the bearers of the greatest risk. Harris-Fry *et al.* (2017) identified eight determinants for intra-household food allocations; 1) relative economic contributions or physically strenuous work, 2) cultural and religious beliefs about food properties and eating behaviours, 3) relative social status within the household, 4) beliefs that everyone should be given their 'fair share', 5) decision-making, social mobility, and control over resources, 6) bargaining power, 7) food as a means to establish and reinforce interpersonal relationships, and 8) individual tastes and preferences. Intra-household food allocations through bargaining thus likely result in unequal intra-household food allocations among men and women and among children, adults, and elderly.

Other household level factors influencing intra-household food allocations are educational levels, nutrition knowledge, household occupation, land ownership, household size and structure, religion, ethnicity, and caste (Harris-Fry *et al.*, 2017). The anthropologist Barbara Miller (1997) argues in her review on intra-household food allocation in South Asia that the food allocation disparity between sons and daughters under the age of 15 is greater among landed households compared to landless households. Miller found that the reason for this class-based disparity relates to kinship systems in which daughters are more costly for higher classes due to marriage practices in which daughters take wealth from the natal family with them to the conjugal family. Poor households do not expect to provide daughters with costly marriage gifts and therefore expected marriage costs do not influence allocation of resources to the daughter before her marriage (B. D. Miller, 1997). This implies that in landowning households, daughters are more often chosen by more powerful household members to be the bearer of starvation risks, not because of the immediate cost to feed daughters, but because of the future cost of her marriage. However, Harris-Fry *et al.* (2017) found that most studies report inconsistent findings; that household food insecurity and scarcity indeed disproportionately affect women's food allocations, but the evidence regarding the effect of household wealth and income on intra-household food allocations was mixed.

2.3 Access to Land

Land, especially arable land, is one of the most valued assets in terms of economic, political, social, and symbolic importance (Agarwal, 1994). In an agricultural society, access to land, or lack thereof, determines a person's ability to exploit labour from others, or to be exploited (Chakravarti, 2001). Shipton and Goheen (1992) write that in African agricultural societies, unequally distributed land rights are commonly adjusted via several arrangements, frequently on a temporary basis. The result is that the people who hold rights to the land are not necessarily the users of the land, suggesting a conceptual difference between rights to land and access to land.

Rights to land are enforceable claims for ownership or usufruct that enjoy social or legal recognition and support (Agarwal, 1994; Ribot and Peluso, 2003). In anthropology, property, which can include land, refers to the rights, as agreed within a network of social relations, that people hold over a thing, not the thing itself (Hann, 1998). Property is about relations between people, set in time and space, and includes three major elements; the social units that can hold rights and obligations, the construction of valuables as property objects, and the sets of rights and obligations social units hold over the property objects (Benda-Beckmann, Benda-Beckmann and Wiber, 2006). Rights provide a certain degree of social power (Ribot and Peluso, 2003), which suggests that rights to land play an important role in inequality in social relations.

Access to land, on the other hand, refers to a variety of arrangements and strategies for using, claiming, and obtaining land, for example through informal concessions, in addition to rights of ownership and use (Agarwal, 1994; Meinzen-Dick and Pradhan, 2002). Similar to property relations, access to resources is an expression of social relations (Peluso, 1996). Berry (1989) identified exchange and

membership(status) to social units as important ways of gaining access to resources, while De Janvry *et al.* (2001) differentiate methods of access between intra-family transfers, intra-community access, land markets, and land reform, whereas Shipton and Goheen (1992) identify membership, labour, and capital investment as paths to gain and maintain access to land. Ribot and Peluso (2003) define access as “the ability to benefit from things” and specifically distinguish access from property (2003, p.153). The concept of access focusses on abilities rather than rights, and therefore includes a greater variety of opportunities to benefit from resources, even if these opportunities are not socially or legally legitimate (Ribot and Peluso, 2003). This is according to Myers and Hansen (2020) the greatest contribution of a theory of access; shifting the main focus away from property and rights towards the various other mechanisms through which people gain, maintain, and control access to resources.

The conceptual difference between property and access has important implications; just because someone owns a resource, does not necessarily mean that benefits can be derived from it and someone who derives benefits from a resource does not necessarily own the resource. However, there are also situations where property and access overlap; where rights lead to access and access is derived from rights. Sikor and Lund (2009) refer to this as the ‘grey zone’ between rights to resources and mere access to resources. Access thus includes rights and ownership, but is not limited to rights and ownership alone (Ribot and Peluso, 2003). Therefore, I discuss people’s relationships regarding use of and claims over land through the broader concept of access.

Access to land not only includes private property. Frequently used dualisms regarding property conflate property categories. Hann (2015), for example, writes that the individual-collective dichotomy is a Western imposition that ignores the presence of a hierarchy of rights combining various sets of relationships. Communal lands or forests, for example, are not privately owned by individuals, but associated with access for specific groups of people or communities. This does not suggest all people within a community have equal access to communal lands and forests (Yanagisawa, 2008). Communities are heterogeneous with multiple layers of power and different priorities and claims regarding communal lands and forests. While these different priorities can cause conflict, it can also result in the exact opposite by complementing each other’s livelihoods (Leach, Mearns and Scoones, 1999). Communal lands are decreasing in availability, mostly due to state appropriation and privatisation, and in quality (Agarwal, 1994). Access to land is thus a concept that discusses relations between people and between people and land beyond mere rights over private property.

2.3.1 The Importance of Land in the Context of Food Security

Food security is a socio-economic issue. Sen (1981) argues that socio-economic inequalities explain why not all people within a famine-stricken area are equally affected by famine. One socio-economic inequality contributing to inequality in food security for rural households is access to land (Muraoka, Jin and Jayne, 2018; Pallas, 2011). Holden and Ghebru (2016) write that research around land tenure and research around food security have been two separate disciplines and they find only a few examples of studies that

comprehensively combine both. Similarly, Muraoka, Jin and Jayne (2018) argue that the relationship between access to land through rental and food security is not properly explored and understood. Although Maxwell and Wiebe (1999) acknowledge that there is increased scholarly interest in the links between land tenure and food security, they argue that this interest is explicit and critical explorations of these links are scarce. Holden and Ghebru (2016) argue that linking these two disciplines is an important step towards understanding the impact of the increasing land scarcity on poor communities. Indeed, Doss, Summerfield and Tsikata (2014) associate a current worldwide surge in land acquisitions to the global search for food security, which simultaneously resulted in increased landlessness among small farmers.

Access to land links to food security in two common ways; through income generation and through food production (Muraoka, Jin and Jayne, 2018). Maxwell and Wiebe (1999) observed that a conventional link between land tenure and food security is made through agriculture and food production. Marginal lands are often an important source for livelihood activities such as food production and gathering food, herbs, and fuel (Doss, Summerfield and Tsikata, 2014). Simultaneously, increasing land scarcity and land degradations contribute to food shortages (Shipton, 1990). Santos *et al.* (2014) argue that tenure security over land increases investments in agriculture, which in the long-term contributes to the household's food security through food production. However, they emphasise that size of land matters, among other variables such as access to credit and other resources. Berry *et al.* (2015) proposed to include environmental parameters to the concept of food security, in addition to the already existing social parameters, specifically the availability and accessibility of natural resources such as land. The type of access to land also plays an important role in the relationship with food security. Muraoka, Jin and Jayne (2018) found that in Africa the productivity on rented land was considerably lower than the productivity on owned land. Land is not only relevant to food security through food production but also contributes to food access. For example, Santos *et al.* (2014) write that poor rural households in developing countries heavily depend on the agricultural sector for their income, even if only as agricultural wage labourer. Land-based livelihoods thus generate income, which can be used to access food through markets.

This conventional link between access to land and food security is thus a linear, one-way relationship (Maxwell and Wiebe, 1999). However, Maxwell and Wiebe (1999) also observe feedback links, particularly in relation to re-investment of resources and in relation to food intake and labour resources, and therefore propose a dynamic linkage between access to land and food security. Rammohan and Pritchard (2014) bring two important nuances to the links between access to land and food security; land does not ensure food security and land-based livelihoods are disappearing into the background by households' need to diversify livelihoods.

2.3.2 Women and Access to Land

Access to land is embedded in gender relations. Women among all castes and religions own considerably less land compared to men and of poorer quality as well (Agarwal, 1994; Saxena and Parthasarathy, 2016). Institutional barriers and customary social norms related to gender inhibit women from claiming and

gaining rights to land (Agarwal, 1994; Rao, 2011b; Rao, Pradhan and Roy, 2017). Increasing women's access to land therefore requires challenging gendered social norms. Doss, Summerfield and Tsikata (2014) persuasively argue that "women generally have less control over land than men do, [but] differences among women (related to age, marital status, residence, household composition, and social status) are equally important determinants of the strength of their land interests" (2014, p.3). It is thus important to realise that not all women are in the same position regarding access to and control over land.

Ursula Sharma, an anthropologist and influential and pioneering academic on Indian women, property, and production, wrote in 1980 that there is not one key link or explanation for the influence of women's access to land or women's labour participation on women's status in all societies, but uncovering the distribution of land rights and women's situation in the labour market provides a first step in a theoretical analysis of rural women's positions. Sharma (1980) shows that ideologies in the organisation of production through property and labour define women's dependency on men. Women's landownership strengthens their ability to participate in decision-making within the household and within the community (Allendorf, 2007; Rao, 2011a; Santos *et al.*, 2014). Increasing women's bargaining power to claim landownership can be accomplished by raising awareness about tenure rights (Mangubhai, 2014), through forming new relationships of interdependency or strengthening networks for support, although this can also do the exact opposite (Ribot and Peluso, 2003; Rutten *et al.*, 2017), and investing (money, time, labour) in the land (Quisumbing *et al.*, 2001). Agarwal (1994) points out that claiming landownership can result in losing entitlements elsewhere, for example, if the claim harms social relationships within the family, community, or village, and might be a reason for someone not to claim landownership.

Land is not solely a material asset; land is intertwined with gendered meanings and identities within the household, the community, village, state, and market (N. Rao, 2017). Benda-Beckmann, Benda-Beckmann and Wiber (2006) write that property is important in structuring the identity of social groups, and in the continuity of these groups through inheritance practices. Carrier (1998) argues that anthropological studies on property usually focus only on the practicalities of kinship and social relationships, while taking notions and meanings of property for granted. Property in anthropology thus refers to distributions of rights and entitlements, in practical outcomes and in ideal and moral arguments, both symbolic and material (Hann, 1998).

2.4 Theoretical Framework Linking Gender, Land, and Food

Various theories explain access to or allocation of resources. In the context of gender, land, and food, three theories focus on these concepts and some of the connections between them: the entitlement approach, a bundle of rights metaphor, and a bargaining approach. The entitlement approach was developed to understand famines, an extreme form of food insecurity, in which command over food depends on assets such as land. A bundle of rights metaphor focuses on property relations and the various rights that link social units to each other and to various properties. One of the uses of the bargaining approach is to

understand the importance of gender in access to resources, the allocation of resources, and intra-household decision-making.

2.4.1 The Entitlement Approach

For rural families, landownership and other income-earning means are “the most important determinants of exchange entitlements” (Agarwal 1994, p.62). The entitlement approach was developed by Amartya Sen (1981, 1990) as an alternative exploration of famines, an extreme form of food insecurity, redirecting the focus from food availability to food accessibility. The entitlement approach is not a refutation of the role of food availability in famines, but provokes an exploration of additional causes (Osmani, 1993). Sen (1981) based the entitlement approach on the concepts of ‘endowments’ (what is owned, such as assets, resources, and labour) and ‘exchange entitlements’ (the possibilities resulting from exchange through production and trade). The concept of entitlements is referred to as command over resources (Koch, 2008), properties, rights, and opportunities that could be obtained through legitimate means (Ribot, 2014), and “actual protected access to resources” (Mangubhai, 2014, p.11). Entitlements in Sen’s view refer to “the capability, under a given social, legal, and economic regime, of an individual or group to obtain legitimately the means of subsistence” (Appadurai, 1984, p.481). Leach, Mearns and Scoones (1999) point out that entitlements in this view do not refer to what people *should* have, as in their rights, but to what people *can* have. Mangubhai (2014) therefore emphasises that an entitlement approach investigates the distribution of resources, not how resources should be distributed. Entitlements are therefore distinct from rights, as people need to act on their rights to derive concrete entitlements from them (Mangubhai, 2014).

The entitlement set is “the total set of rights and opportunities with which a household can command (...) different bundles of commodities” (Ribot, 2014, p.681). The entitlement set thus not only includes those goods and services actually enjoyed, but *all* possible entitlements (Osmani, 1993). Osmani (1993) writes that the relationship between a set of endowments and the entitlement set is referred to as entitlement mapping, or E-mapping, and would portray all the possible exchange entitlements. The entitlement set is dependent on the endowments and on E-mapping, and therefore can only change when there is a shift in endowments or in E-mapping/exchange entitlements (Osmani, 1993). Exchange entitlements are obtained through the market, and are distinct from entitlements that are otherwise obtained (non-exchange entitlements), for example through government food provision schemes or employment generation (Fine, 1997). Sen (1981) identifies four entitlement relations, in which one set of ownerships is connected to another set of ownerships: trade-based entitlement, production-based entitlement, own-labour entitlement, and inheritance and transfer entitlement. A change in any of these exchange entitlements thus has the potential to change the entitlement set in such a way as to potentially result in entitlement failure. In addition to a change in exchange entitlements, a fall in endowments can also result in entitlement failure (Dreze and Sen, 1989).

The entitlement approach focusses on “the micro(-economic) capability for survival” and can therefore be applied to the household or the individual (Fine, 1997, p.624). Osmani (1993) writes that it

can also be extended to larger social units, by assuming a 'representative individual'. Even with identical endowments, entitlement distributions are often unequal, depending on the economic opportunities open to different people (Sen, 1987). Entitlement failure, therefore, occurs when a person's entitlement set does not contain enough opportunities to command the minimum required goods or services (Osmani, 1993). Ribot (2014) argues that the entitlement approach highlights that rights-based approaches are not enough when people fail to obtain sufficient command over food within legitimate and legal systems.

The entitlement approach is also critiqued by scholars. Fine (1997) observes that the entitlement approach is based on the notion that non-exchange entitlement should make up any deficiency in the exchange entitlement, while issues of power, property relations, and class transect this dichotomy. Fine (1997) therefore argues that such issues need to be explored before individual entitlement relations are examined to fully understand the presence or absence of entitlements.

The Extended Entitlement Approach

The entitlement approach has according to Leach, Mearns and Scoones (1999) three limitations that can be overcome by an adjustment of the approach and therefore propose an 'extended entitlement approach' to investigate 'environmental entitlements' in community-based natural resource management. First, Sen's entitlement approach is according to Leach, Mearns and Scoones (1999) not only useful to explain how entitlements can be gained from endowments, but likewise how endowments can be obtained. An extended entitlement approach thus can be used to investigate command over commodities *and* over endowments. In other words, an extended entitlement approach can be used to analyse command over food as well as command over land.

Second, Sen considered endowments as legal, individual ownership of resources such as land. However, as Devereux (2001) calls attention to, this consideration does not include weaker land claims such as access and usufruct rights, or institutional or communal tenure rights. Devereux (2001) refers to this as the 'fuzziness' of ownership relations, i.e., where control over an endowment and control over the entitlement can be held by different social actors. While Devereux focusses on common property, such fuzziness also applies to private property as non-owners may have access to private property or may command entitlements derived from it. Choudhary (2015) argues that this fuzziness within the entitlement approach includes situations where informal agreements regarding attitudes and social beliefs take precedent over formal agreements. Therefore, the extended entitlement approach considers entitlements not only as derived from what is owned, but obtained through any socially sanctioned mechanism, and defines entitlements more broadly as "rights and resources that social actors have" (Leach, Mearns and Scoones, 1999, p.233) rather than Sen's narrower definition of what is owned.

Third, while Sen (1986) acknowledges the important role of choice regarding the entitlement set, Devereux (2001) concludes that the entitlement approach does not capture an understanding of intra-household power relations, which are crucial for the reality of resource allocation (which directly influences food entitlements) and the intra-household allocation of food and other entitlements. The same

shortcoming could be argued to affect an understanding of decision-making processes within social units beyond the household, for which Osmani (1993) proposed the use of a 'representative individual'. Similarly, Leach, Mearns and Scoones (1999) argue that Sen's entitlement approach does not discuss the influence of power relations in decisions about endowments and entitlements. Their extended entitlement approach therefore considers entitlements as the outcome of negotiations embedded in power relations (Leach, Mearns and Scoones, 1999). Power relations are according to Hartmann (1981) constructed by patriarchy and capitalism with the potential to lead to tension, conflict, and consequently change. Power differences often result from ascribed rather than acquired characteristics, such as caste, class, ethnicity, age, and gender; thus marginalising entire groups of people in their capability to expand their endowments and claim entitlements (Devereux, 2001). Leach, Mearns and Scoones' (1999) extended entitlement approach thus has a broader application compared to Sen's entitlement approach.

A Theory of Access

Similar to the (extended) entitlement approach, a theory of access seeks to explain inequalities in people's abilities to benefit from resources. A theory of access can be used to analyse resource conflicts through which some people gain, and other people lose the ability to benefit from that resource (Ribot and Peluso, 2003). Access analysis consists of identifying the access mechanisms required to gain, maintain, and control access to a resource, and mapping the access mechanisms for the flow of benefits resulting from access to the resource (Aguirre, 2013). In their review of articles engaging with a theory of access, Myers and Hansen (2020) argue that a theory of access has a broader and more flexible application compared to the entitlement approach. There are many similarities between a theory of access and the extended entitlement approach. While 'exchange entitlements' indicate the theoretically available possibilities that can be derived from endowments, Ribot and Peluso (2003) use 'access mechanisms' to constitute the preconditions for the ability to derive benefits from resources. These access mechanisms are divided in two categories; rights-based access mechanisms and structural and relational access mechanisms (Ribot and Peluso, 2003). As structural and relational access mechanisms, Ribot and Peluso (2003) identify technology, capital, markets, knowledge, authorities, social identities, and social relations. Leach, Mearns and Scoones (1999) had already recognised in their extended entitlement approach that in order to derive entitlements from endowments, additional endowments such as labour and capital are often required. In other words, access mechanisms can be considered as the additional endowments required to realise exchange entitlements.

However, there are some important differences as well. While rights remain central in the concept of endowments within the extended entitlement approach, within a theory of access the legitimacy of peoples' claims to resources are irrelevant. Thus, while entitlements are legitimately obtained goods and services, goods and services in access theory can be obtained through any means, not only legitimate. Ribot and Peluso (2003) wrote that access analysis "helps us understand *why* some people or institutions benefit from resources, *whether or not* they have rights to them" (2003, p.154; emphasis in the original). However,

Doss and Meinzen-Dick (2020) argue that a distinction between rights to access land and merely tolerated access is crucial as access can be withdrawn at any moment in the latter. Furthermore, Sikor and Lund (2009) argue that this distinction is important for two reasons; firstly, people seek to secure their access to resources by obtaining property rights legitimised by politico-legal institutions, and secondly, “[w]hile rights may have no value at a certain point in time, the fact that they are somehow enshrined in legislation or recognized by some politico-legal institution may come in handy if circumstances change” (Sikor and Lund, 2009, p.6). Thus, a theory of access is too unspecific as it does not make a distinction between benefits derived from resources in which rights are held and benefits derived from resources accessed without rights or even illegitimately, for example through theft. Since this study is concerned with the role of various types of access to land in food security, any analysis in which the type of access is irrelevant will not serve the aim of this study.

One other important difference between the (extended) entitlement approach and a theory of access is that endowments include one’s own labour, while access only focusses on ‘things’, “including material objects, persons, institutions, and symbols” (Ribot and Peluso, 2003, p.153). Thus, while this includes benefitting from another person’s labour, it does not include benefitting from one’s own labour (one’s own labour in access theory is an access mechanism, not a ‘thing’). As I intend to compare vulnerability to food insecurity in households with access to land with households without access to land who fully rely on their own labour, my analytical framework must allow both types of households to be included. This means that a theory of access is not very suitable for this study’s aim.

For the purpose of this study I will therefore depend on the (extended) entitlement approach, as this theory is best suited to analyse entitlements derived from endowments, but only on the condition that the definition of endowments is broadened beyond what is owned (Sen, 1981) and beyond the rights and resources that social actors have (Leach, Mearns and Scoones, 1999) to refer to the assets, rights, resources, and labour social actors can access, i.e. benefit from. A broader definition of endowments means that endowments are no longer limited to property with clearly defined property rights but include various arrangements of access that embody various agreements between people regarding the rules of access.

2.4.2 A Bundle of Rights Metaphor

A bundle of rights metaphor explicitly acknowledges the existence of various arrangements and property types beyond legal ownership (Meinzen-Dick *et al.*, 1997). The introduction of a ‘bundle of rights’ is by many anthropologists ascribed to Henry Sumner Main (1861 [1986]) and extended by Gluckman (1965) (Turner, 2017). A bundle of rights refers not to rights *in* access, but to rights *derived from* access. As mentioned in Chapter 1, Benda-Beckmann, Benda-Beckmann and Wiber (2006) emphasised that a bundle of rights metaphor has four major uses to analyse the agreements between people regarding property. Johnson (2007) emphasises that a bundle of rights is a descriptive and analytical theory rather than a “new normative idea” (2007, p.247). This suggests that a bundle of rights metaphor is useful to understand and explain the complexity of existing ideologies and practices related to property relations.

Within a bundle of rights, Schlager and Ostrom (1992) identified five independent rights for common-pool resources; 1) access, the right to enter a defined territory; 2) withdrawal, the right to take produce from a territory or resource; 3) management, the right to adjust and transform the use of a resource; 4) exclusion, the right to decide who else gets access; and 5) alienation, the right to sell the resource or give it for rent or lease. Fennell (2011) writes that the application of these rights for common resource management is highly dependent on local contexts and institutions. Common property is according to Bromley (1989) distinct from open access and individual property as there is a well-defined social unit that can use and manage the property rather than a single social actor or an undefined group where no one has rights or duties regarding the property. While Schlager and Ostrom (1992) identified these rights for common-pool resources, these independent rights can also apply to other types of resources (Meinzen-Dick *et al.*, 1997) and various social actors within or beyond communities (Sikor, He and Lestrelin, 2017). These five rights, or sticks, can be used as points of reference for the four major uses of the bundle of rights metaphor; they represent the totality of property relations within one society, a specific property relation, for example landownership, can be identified by a particular combination of these five rights, one property object, like a reserved forest, can contain multiple bundles of these rights for different social units, and one social unit can have multiple bundles of various combinations of rights to multiple properties. In order not to confuse the independent right of access, i.e., the right to enter a defined territory, with access to land, i.e., the ability to benefit from land, I will refer to the former as the right of entry.

A bundle of rights shows gender differences (Meinzen-Dick *et al.*, 1997); for private lands, women may have rights of entry, withdrawal, and management, but rights of exclusion and alienation is less likely compared to men, while especially the right to alienate is often considered the right that defines landownership (Doss, Summerfield and Tsikata, 2014). A bundle of rights does not represent a direct relationship between a social unit and a property object (Johnson, 2007), but a web connecting different social units and different property objects through a multitude of different bundles of rights (Benda-Beckmann, Benda-Beckmann and Wiber, 2006). The legitimacy of claims made over natural resources may be subject to bargaining as different laws may define rights differently (Meinzen-Dick and Pradhan, 2002). Sikor, He and Lestrelin (2017) emphasise that the five rights identified by Schlager and Ostrom (1992) are somewhat static as the multiple legal systems upon which social units can draw may result in overlapping rights.

While the metaphor is widely used, it has not gone without criticism. Arnold (2002) argued that a bundle of rights metaphor does not consider the interconnectedness of people with their environment, nor each property's unique characteristics. This criticism is closely aligned with critique voiced by Duncan (2002); that a focus on individual rights overshadows thinking about a property as a whole and that it falsely presents properties as isolated. Furthermore, Verdery (1998) suggest that for property, an analysis through legal concepts of 'rights' and 'claims' is too narrow and should instead include "the whole system of social,

cultural and political relations” (1998, p.161). However, Johnson (2007) argues that a bundle of rights metaphor is flexible and adaptable, which is indeed illustrated by Benda-Beckmann, Benda-Beckmann and Wiber (2006), who do not reject the bundle of rights metaphor but emphasise its embeddedness in four ‘layers of social organisation’; ideological, legal institutional, social relational, and quotidian practice. For the example of land as property, the layer of legal institutional considers land in objective categories, while in the social relational layer people consider land as a concrete, subjective, and identifiable unit; usually their own plots of land (Benda-Beckmann, Benda-Beckmann and Wiber, 2006). The socio-relational layer focusses on social aspects such as kinship and inheritance practice and how such aspects are expressed in the use, access, and transfer of property (Turner, 2017). How the legal institutional layer considers property relations and how people within the social relational layer consider property relations may both differ from ideological considerations of property relations (Benda-Beckmann, Benda-Beckmann and Wiber, 2006). On the ideological level, the justification and legitimation of specific property regimes are formed (Turner, 2017). Finally, perceptions at the legal institutional, social relational, and ideological may differ from actual practice, the quotidian layer, but are often guided or reinforced by it (Benda-Beckmann, Benda-Beckmann and Wiber, 2006; Turner, 2017). These four layers provide an in-depth understanding of the changing perceptions of property as an object; varying according to context and embedded in social, cultural, political, legal, and economic relations. Adding these layers to the analysis of property thus addresses the criticisms made by Arnold (2002), Duncan (2002), and Verdery (1998) regarding the lack of consideration of the social, political, and cultural embeddedness of property and the unique characteristics of property as a whole. Analysing property relations through a bundle of rights situated in four layers of social organisation thus recognises that property relations are not only about enforceable rights, and this understanding overcomes abstract relationships between people, land, and food.

2.4.3 A Bargaining Approach

A bundle of rights thus refers to the rights derived from access to property, but it does not explain why some social actors have a greater bundle of rights than others, nor does it explain why some have a greater exchange entitlement set compared to others. Indeed, Veetil, Kjosavik and Ashok (2013) write that the bundle of rights metaphor takes for granted the mechanisms through which social actors can obtain property rights. The extended entitlement approach considers the allocation of resources within entitlement relations as the outcome of negotiations, as discussed in section 2.4.1. Command over entitlements as the outcome of interaction and negotiation based on power inequalities lies at the heart of cooperative conflicts. In cooperative conflicts, cooperation (adding to total resources and services) and conflict (distribution of the total resources and services) between people result in social arrangements that resemble a bargaining problem in which the distribution reflects the respective bargaining powers (Sen, 1987). Originating in game theory, bargaining considers interaction between social actors within a set of relationships, such as a household, community, or village, through cooperation and conflict (Agarwal, 1994). The distribution of resources, commodities, or services within a set of relationships is not equally

favourable to everyone within such a relationship; it depends on the members' relative bargaining powers (Agarwal, 1994; Mangubhai, 2014).

What happens when cooperation fails is referred to as 'breakdown position' or 'status quo position' (Sen, 1987), which Agarwal (1994) refers to as 'fall-back position'. This position refers to the available options for a person or group if they terminate cooperation and influences the respective bargaining powers (Agarwal, 1994; Sen, 1987). According to Agarwal (1997), this fall-back position depends on eight indicators: "ownership of and control over assets, especially arable land; access to employment and other income-earning means; access to communal resources such as village commons and forests; access to traditional social support systems such as of patronage, kinship, caste groupings, etc.; support from NGOs; support from the State; social perceptions about needs, contributions and other determinants of deservedness; and social norms" (1997, p.8-9). These eight indicators thus each contribute to bargaining power.

Bargaining power is thus created by the existence of options; options that are limited by economical circumstances as well as social structure (Dube, 1997). Many scholars refer to the fall-back position indicators to explore bargaining power. Kerr (2005), for example, refers to the options of assets, employment and other forms of income, access to commons, networks of support, and social norms and social perceptions to play an important role in bargaining power. Other factors that can influence bargaining power are education (Sraboni *et al.*, 2014) and bargaining skills (Iversen, 2005). As people are involved in multiple relationships at once, their relative power is different within each of them, and can change over time (Ribot and Peluso, 2003). Agarwal (1994) refers to this as there being 'several levels of bargaining', meaning that different factors contribute differently to bargaining power depending on the situation or on what people bargain about. Consequently, a person or group may be more successful in bargaining for food than in bargaining for land, because the relevance and weight of the different factors are specific to each bargain.

One of the indicators of bargaining power, social norms and perceptions, appears a very important one. A bargain that is shaped by patriarchal ideologies, i.e. when a woman jeopardises something (for example social support) in a bargain that a man does not, is what Kabeer (1997) refers to as a 'patriarchal bargain'. The term of 'patriarchal bargain' was coined by Kandiyoti (1988) to discuss the constraints women have to work with in dealing with a patriarchal society, which can change and take new shapes over time. These dealings or strategies can be conscious choices as well as unconscious acts based on an internalisation of gender relations (Kandiyoti, 1988). When multiple people claim rights over the same land, relative bargaining power depends on the perceived social or legal legitimacy of each claim (Agarwal, 1994). However, Kandiyoti (2005) stresses that conventional views about the allocation of resources and entitlements do not determine bargaining outcomes fully but can be drawn upon during bargaining processes. Sen (1987) also stressed the importance of perceived legitimacy and argued that while bargaining problems assume clear, unambiguous interest, in reality, a sense of appropriateness and

legitimacy of what one deserves clouds these interests. Moser (1993) writes that in Sen's cooperative conflict, perception can be biased in two ways; firstly, in one's own assessment of interests and well-being and secondly in contribution perceptions, which can differ from actual contributions. The difference between Agarwal's and Sen's discussion on perceived legitimacy, however, is that while Sen focuses on one's own sense of legitimacy, Agarwal rightly points out that legitimacy as perceived by society or the legal system play a very important role in bargaining power, perhaps more so than one's own sense of legitimacy. Additionally, Kandiyoti (2005) emphasised Agarwal's (1994) argument that women face external limitations and obstacles that severely constrain women's abilities to pursue their self-interests.

Simultaneously, initiating a bargain, or taking part in a bargain, is not an equal option for every social actor. Katz (1997) refers to the ability to enter a bargain as 'voice', while 'exit' refers to the alternative options available when a cooperative solution cannot be made. 'Exit' is much alike fall-back position, while 'voice' depends on personal characteristics such as assertiveness and on institutional characteristics such as social norms (Katz, 1997). Studies often choose one indicator, such as labour, income, or assets, as determinant of bargaining power (Quisumbing and De La Briere, 2000). Although no uniform method to measure bargaining power exists, scholars often use the ability to participate in decision-making as proxy for bargaining power (Sariyev, Loos and Zeller, 2020). However, Kabeer (1997) argues that if power is considered as decision-making alone, little attention is paid to the "relevance of ideology and interests in the intra-household bargaining and negotiation" resulting in little added knowledge about the role of power in women's and men's daily lives in "different householding systems and different patriarchal regimes" (1997, p. 266).

One important set of relationships in which bargaining takes place is the household. The household can be considered a site of cooperation and conflict, in which intra-household resource allocations are the outcome of a bargaining process (Kandiyoti, 2005). A bargaining approach also provides space to consider the allocation of goods and services that are shared among household members, such as child services and housing (Manser and Brown, 1980). Bargaining models for the household (including cooperative conflict) open up the possibility to consider power relations, in contrast to the unitary model for the household (Kabeer, 1997), which was discussed in section 2.1.5. Katz (1997) argues that current cooperative bargaining models of the household incorrectly assume similarity among household members and do not specify the process of resource allocation within the household. She furthermore argues that gender (and consequently power) is one of the most important characteristics that result in dissimilarity among household members that influence decision-making and resource allocation. An institutional approach to intra-household analysis acknowledges that institutional features of the household, such as gendered roles and responsibilities, interplay with decisions in resource allocations (Katz, 1997).

Each household member's autonomy and ability to survive outside the household, i.e. their fall-back position, determines their bargaining position (Agarwal, 1997). Changes in individual household members' opportunities outside the household change their relative bargaining powers (McElroy, 1997).

Intra-household bargaining, particularly between spouses, can be considered an infinite bargaining process that will only be terminated through divorce or the death of a spouse (Balasubramanian, 2013). The infinity of the bargaining process within a marriage suggests that each partner takes future utility into account as well as long-term threat points for decision-making (Balasubramanian, 2013). Furthermore, intra-household bargaining power is influenced by social institutions and norms “generated and maintained” outside the household (Kevane, 2000, p.90). At the same time, social rules and norms are usually taken for granted within households, which Lukes (1974) refers to as ‘*power as non-decision-making*’ (Kabeer, 1997). Rao (2017) therefore stresses to focus on the embeddedness of a person in social and material relations and Agarwal (1997) argues that the interaction of ideologies, practices, and structures of social hierarchy establish and are established by gender relations. In other words, intra-household bargaining does not take place in isolation but is embedded in past and future bargains and in social relations beyond the household.

Bargaining in relationships beyond the household differ from those within the household, since the impact of one member not cooperating in the former is considerably less than in the latter and, as opposed to the household, a community is generally not a unit of consumption and production to which all members add their resources (Agarwal, 1997). Bargaining beyond the household between social groups is challenging as even within social groups, for example gendered groups, different preferences, interests, and desires occur as gendered groups are heterogeneous (Mohanty, 1984). However, certain social practices might be challenged when subordinate groups gain bargaining power, even when such practices may not appear open for negotiation as they are considered tradition (Agarwal, 1994). Bargaining thus takes place at different levels of social units and the level of cooperation within the social unit determines not only how much bargaining takes place, but also influences relative power positions of the social actors within the social unit.

2.5 An Analytical Framework for Assessing the Findings

The analytical framework used in this dissertation thus combines an extended entitlement approach, a bundle of rights metaphor, and a bargaining approach. The key concepts discussed in this chapter will be applied in the empirical chapters that will follow. To recap, the key concepts are access, bargaining, bargaining power, bundle of rights, decision-making, endowments, entitlements, fall-back position, food security, and gender relations (see Table 2.1).

Access	The ability to benefit. This study focusses on access to land, i.e., the ability to benefit from land. The key elements I draw upon are rights, informal concessions and other non-enforceable claims, the benefits of entry, withdrawal, management, exclusion, and alienation. Important factors through which to gain and maintain access to land that will be of interest in this study are membership(status) to social units, intra-family transfers, land markets, land
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	reform, labour, and capital investment. These factors are embedded in gender and caste.
Bargaining	The process in which social actors within cooperative relationships establish and utilise their bargaining power to determine which social actors command which resources, commodities, or services.
Bargaining power	Refers to social actors' relative power positions within cooperative relationships. Power relations depend on characteristics such as caste, class, ethnicity, age, and gender. Important indicators for bargaining power include fall-back position, education, and bargaining skills. Bargaining power itself cannot be observed, only the <i>expression</i> of bargaining power. One such expression is in decision-making. The key elements I draw upon to study bargaining power are decision-making, fall-back position, and gender.
Bundle of rights	A set (a bundle) of relations (rights) between different social units and different property objects. The bundle of rights is not about rights <i>in</i> access to property, but rights <i>derived from</i> access to property. These rights do not only refer to enforceable claims but are nuanced by an analytical distinction between the four 'layers of social organisation' (ideological, legal institutional, social relational, and quotidian practice). The key elements I draw upon are the five independent rights of entry, withdrawal, management, exclusion, and alienation.
Decision-making	An observable expression of bargaining power and refers to elements of choice, for example the process of resource allocation. The key elements I draw upon are intra-household resource allocations and gender relations.
Endowments	Rights, assets, labour, and resources that social actors can access and from which entitlements can be derived through exchange relations. The key elements I draw upon are access to land and labour.
Entitlements	Refer to command over goods and services derived from endowments through exchange relations (production, trade, inheritance- and transfer, and own-labour) in which the access mechanisms of rights, technology, knowledge, capital, markets, authorities, social identities, and social relations play a role.
Fall-back position	The available options for a social actor or social unit independent from a cooperative relationship. The fall-back position depends on assets, employment and other forms of income, access to communal resources, access to networks of support (for example from kinship, NGOs, and the State), social perceptions about needs, contributions, and deservedness, and social norms. These eight indicators are the key elements I focus on to study fall-back position.

Food security	Defined as “when all people, at all times, have physical and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life” (Santos <i>et al.</i> , 2014, p.861). Food insecurity occurs when food security is limited or uncertain. The key elements I draw upon are food availability, accessibility, stability, and utility and intra-household allocations. This study focusses on the analytical units of communities, households, and individuals. On these micro-levels, variables of interest are income allocations, labour opportunities, access to land, gender, and caste.
Gender relations	The interactions between the socially constructed categories of men and women. Gender relations are generated and maintained through kinship and relations within the household. The key elements I draw upon are the division of labour, resource access, resource allocation, and decision-making.

Table 2.1. Key Concepts

The interaction between the key concepts and the three theoretical perspectives is shown in Figure 2.1. This study is interested in the relationship between land as endowment and food security as entitlement. The analysis starts with exploring the endowment of access to land. This includes an analysis of how this endowment was obtained and what the rules of access are. Distinctions are made between access arrangements based on individual ownership and various arrangements without ownership by applying a bundle of rights metaphor. These elements of land, source of access, and rules of access will be explored and analysed in Chapter 5 with a continuous reference to gender relations. The aim of this study is to link access to land as endowment to food security as entitlement. The analysis of food security will be the focus of Chapter 6. Not only access to land is included as endowment from which command over food is derived, but so is labour. Thus, using the entitlement approach, each type of endowment, based on the specific bundle of rights, will undergo E-mapping to establish the total range of possibilities to obtain command over food. The process of E-mapping will be the focus of Chapter 7 and here gender relations will be an important variable. In the final step of analysis, in Chapter 8, the bargaining approach is applied to analyse intra-household decision-making related to the various identified possibilities to obtain command over food. The indicators of fall-back position, or bargaining power, will structure the analysis of decision-making in which gender relations are the explicit topic of interest.

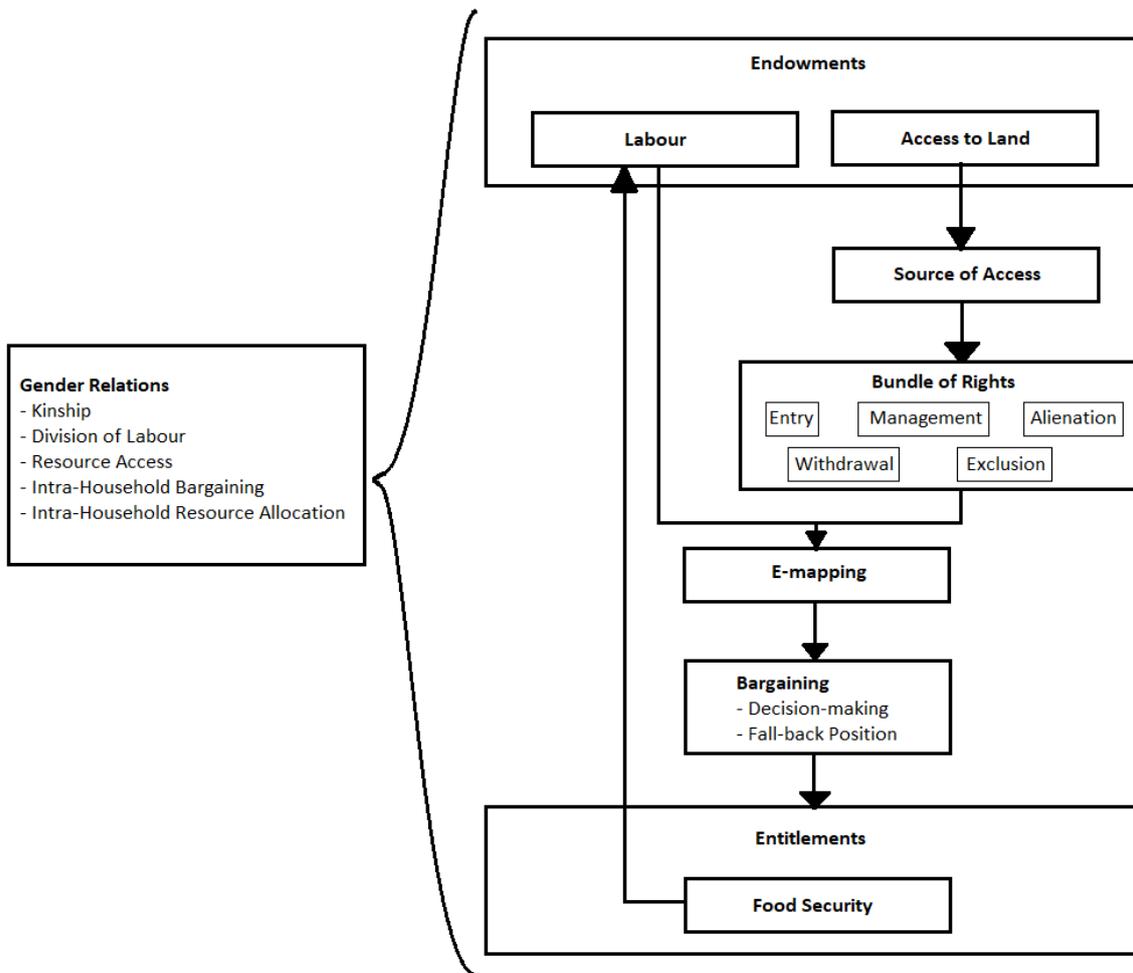


Figure 2.1. Analytical Framework

Chapter 3 - The Research Context of South India

The reviewed literature in Chapter 2 focussed on the concepts and debates around gender relations, food security, and access to land, the theories of the entitlement approach, the bargaining approach, and a bundle of rights, and introduced the analytical framework that will form the base of the analysis of the findings presented in the upcoming empirical chapters.

The current chapter takes the concepts presented in Chapter 2 and situates these in the context of South India, Tamil Nadu, and the specific village that is the research location for this study. First, however, the research location will be introduced with data on geography, population, and poverty.

3.1 The Research Location

India has a population of 1.2 billion people divided over 29 states. One of these states, in the south of India, is Tamil Nadu (see Map 3.1) where the language is Tamil. Tamil Nadu covers 13 million hectares;



Map 3.1. Tamil Nadu and location of Salem District. Sources: Adapted from Veethi.com and Wikimedia.org

almost 4% of India's total landmass. The population of Tamil Nadu is 72 million, representing 6% of India's total population. India is a rural society; 70% of India's total population lives in rural areas, compared to 52% of the population in Tamil Nadu (State Planning Commission Chennai, 2012). The majority of Tamil Nadu's population is Hindu (88%), with other main religious groups being Christians and Muslims (Government of India, 2011c).

The majority of the households in Tamil Nadu are classified as OBC (69%), followed by SC households (27%), and ST households (2%) (Government of India, 2017b). There are 36 different ST communities in Tamil Nadu, most of whom are cultivators, agricultural labourers, or dependent on forests for their livelihood (State Planning Commission Chennai, 2012). The Malayali, which means hill people (Rekka and Kumar, 2014), represent the largest (45%) ST community in Tamil Nadu. There are 76 different SC communities in Tamil Nadu, the majority belonging to the Adi Dravida (50%), followed by the Pallan (16%) (Government of India, 2011c). Among all households in Tamil Nadu, 16% are female-headed households (Government of India, 2017b). The population under the age of 15 is 33%, while the population over 65 years of age is only 7%. BPL cards are held by 12% of Tamil Nadu households in 2015-16, compared to only 8% in 2005-06.

Salem District

Tamil Nadu is divided into 21 districts. Salem District is the fifth largest district in Tamil Nadu and is located inland, near the south-eastern border with the state of Karnataka (see Map 3.1). Salem, as part of the Mysore Kingdom, came under colonial British administration on March 17th, 1792, after the Tipu Sultan signed a peace treaty with the East India Company. After Tipu's death in 1799, the entire Mysore Kingdom came under direct colonial rule (Kumar, 1965; Saravanan, 2016). Since 1860, the capital of Salem District is Salem City. After Independence in 1947, the five administrative states of South India were divided into four new states based on linguistic characteristics (Besley *et al.*, 2016). Salem then became part of Tamil Nadu with Madras (now renamed Chennai) as capital.

Salem District is divided into 13 taluks and 20 blocks (see Map 3.2), with each block administratively divided into Corporation, Town Panchayats, and Village Panchayats. Village Panchayats cluster up to 15 villages (or hamlets). The district covers a total area of 523 700 hectares. In 2011, the total population of Salem District was 3 482 056, which makes up 4.83% of Tamil Nadu's total population. SC communities comprise 16.7% of Salem's total population, which is below state average, and ST communities 3.4%, which is above state average. The majority (96%) of the population in Salem District is Hindu, higher than the national proportion. Main livelihoods in Salem District relate to agriculture (mango's and sago are important and famous products from this region), while other important sectors are the textile sector, magnesite, bauxite, and minerals mining, and a diverse industrial sector (Salem Corporation, no date).

The population distribution between rural and urban areas is almost equal; 49% of the population is rural and 51% urban. With a male-female ratio of 1000:954 it has a better sex ratio than the national average of 1000:940. Literacy in Salem District is 73% (sex ratio 1000:788) according to the 2011 census, an increase from 65% (sex ratio 1000:697) in 2001, demonstrating a clear rise in literacy among women. Literacy rates in urban areas are substantially higher (80%) compared to rural areas (66%), with proportionally more literate women in urban areas (sex ratio 1000:838) compared to rural areas (sex ratio 1000:708) (Government of India, 2011b). In rural Salem District, 67% of the households do not have access to sanitation facilities, compared to 40% of the urban households. For both rural and urban Salem, these numbers are higher compared to Tamil Nadu (61% and 17%, respectively) (Government of India, 2017b). In rural areas of Salem District, 63.26% lives in permanent houses, 16.35% in semi-permanent houses, and 19.93% in temporary houses (Government of India, 2011b).



Map 3.2. The 20 blocks in Salem District. Source: Adapted from District Human Development Report 2017: Salem District.

The 2011 population census shows that 15% of Tamil Nadu's tribal population lives in Salem District; the largest tribal population among the 21 districts in Tamil Nadu (Government of India, 2011b). There are 26 distinct tribal communities in Salem District, the majority (91%) of the tribal population belonging to the Hindu Malayali community (Government of India, 2011b).

Gender equality in Salem District, measured by the indicator of political participation, is judged as satisfactory by the Government of India since 41% of block councillors are women, and 38% of Village Panchayat president (State Planning Commission Tamil Nadu, 2017). Labour participation in rural Salem District is higher among men (60%) compared to women (40%), the latter more likely to be non-workers. Women rural workers only dominate one sector: the agricultural sector. Men

dominate the other sectors, which include cultivation, household industry, and other work (Government of India, 2011b). The majority of the rural women in Salem District (52%) are considered non-working, the second largest group of women (24%) work as agricultural wage labourers, only 12% of women are cultivators, and the remaining 12% work in non-agricultural sectors. The majority of rural men work in non-agricultural sectors (Government of India, 2011b).

The research location for this dissertation is Katuyanur. Katuyanur is a village in the block of Kadaiyampatty, in the north of Salem District (see Map 3.2). Kadaiyampatty block has 32 109 households with a total population of 125 478, of whom 20% belong to SC and 4% to ST communities (Government of India, 2011b). Katuyanur is part of the Panchayat Village of Kookuttapatti, together with 12 other villages, and has one Panchayat Secretary, a woman living within the Panchayat Village, and one Village Administration Officer (VAO), a man living near the city of Salem. The District Human Development Report 2017: Salem District presents and analyses the Human Development Index (HDI) for each of the 20 blocks within Salem District (State Planning Commission Tamil Nadu, 2017). The HDI is based on three dimensions: standard of living, education, and health. Kadaiyampatty ranks 16th with a score just over the bottom threshold for medium human development. The same report gives a Gender Inequality Index (GII) for the blocks in Salem District. The GII is based on health, empowerment, and labour market dimensions, and is a scale between 0 to 1, in which 0 is low gender inequality. Kadaiyampatty scores 0.03 on the GII and ranks 9th (State Planning Commission Tamil Nadu, 2017). Poverty, indicated by the proportion of BPL households, persists among 18% of households in Salem District with considerable differences among the 20 blocks: ranging between 9% and 76% of households. In Kadaiyampatty, 27% of households are classified as BPL; the 7th highest percentage in the district (State Planning Commission Tamil Nadu, 2017).

3.2 South Indian Kinship

Kinship systems vary across India, depending on religion, region, caste, north and south India, and patrilineal and matrilineal communities, and as a consequence women's lives across India are affected differently (Dube, 1997). Dyson and Moore (1983) emphasise the North-South divide in relation to kinship and female autonomy, but stress that this division is crosscut by caste. Tamil kinship is characterised by multiple systems, depending on caste, or *jati*, and locality (Clark-Decès, 2014; Kapadia, 1995). Although many overlaps in kinship system exist between *jatis*, there are notable varieties as well, for example in marriage preferences (Clark-Decès, 2014). There has been extensive research into kinship in South India (for example, Dumont, 1953; Gough, 1956; Kapadia, 1995; Ramberg, 2013; Trautman, 1993; Trautmann, 1981), often used interchangeably with Tamil kinship and Dravidian kinship, and is much more complex than what is reported here. Tamil kinship organises property relations and matrimonial practice, among others, based on entitlements, rights, and

privileges, and in ideal form provides the principles of hierarchy and equality (Clark-Decès, 2014). Daughters are given in marriage to form alliances (Ramberg, 2013). In North India, marriage is exogamic as spouses marry outside their kin-group and often outside their village, while marriage in South India is preferred to take place between cross-cousins (Dyson and Moore, 1983). Ramberg (2013) writes that cross-cousin marriages, over time, result in equality between lineages. South Indian marriages preferably take place within a single kin-group; while girls will still move away from their natal home upon marriage and loose membership to the father's lineage, they will not move to a stranger's house (Dube, 1997). Villagers usually share kinship, but consist of several patrilineages and therefore marriages can take place within as well as outside the village (Gough, 1982).

In India's patrilineal society, children are born in the agnatic group of the father (Dube, 1997). This means that if a marriage fails, a woman is expected to leave her children with the father and his family (Ramberg, 2013). Sons remain in this group for the rest of their lives, while daughters are only temporary members until daughters inevitably marry and then will belong to the husband's agnatic group (Dube, 1997). In Dravidian kinship, descent is patrilineal and residence after marriage is patrilocal (Ramberg, 2013; Rengalakshmi *et al.*, 2006). Kathleen Gough (1982) wrote that dominant castes in South India already practiced a patrilineal kinship system during the Sangam Age (100-250 AD). While patriliney is not as strong in South India as in other Indian regions, marriageable partners are still emphasised to belong to different patrilineages and therefore women are denied rights over productive resources, their own labour, and their children (Dube, 1997). Furthermore, Kapadia (1995) emphasises that South Indian women of all castes are considered inferior to men, although in varying degrees. However, kinship systems are not static; Clark-Decès (2014) argues Tamil families become increasingly nuclear and individualistic, which transforms traditional relationships between husband and wife and children and parents.

Furthermore, South Indian kinship focusses more on affinal relationships compared to the focus on blood relations within North Indian kinship (Dyson and Moore, 1983; Rao, 2014). After the household, a local sub-caste community is the most important corporate group organising villagers in their daily lives; a community maintained by women through patrilocal and endogamous marriage practices (Gough, 1982). Social life was relatively egalitarian among members of a (sub-)caste, as caste and socio-economic status were closely related, especially compared to members of different castes, where rituals of pollution shaped social interaction, including higher castes not accepting food or water from lower castes (Gough, 1982). While this overlap between caste and class has reduced and villagers no longer depend on kinship for subsistence, kinship remains an important part of social life (Arumugam, 2020). Although regional differences exist, Hindu's in India prefer to live in multi-generational joint families, particularly among communities where the family members cooperate in

land or business (Dube, 1997; Rengalakshmi *et al.*, 2006). However, it is important to realise that living in joint families is not always a possibility for poor families (Kapadia, 1995). Arable land owned by a joint family is cultivated through cooperation between household units, usually groups of married brothers, thus joining smaller (household) units into larger economic structures (Busby, 2000). Women's bargaining power interrelates with the composition of the joint family and changes over time as the joint family breaks up when married sons establish separate households (Dube, 1997).

3.3 Gender Relations in South India

In India, gender seems a fixed characteristic of an individual, based on bodily differences, which directs a person's actions, behaviour, and relationships (Busby, 2000). However, Kapadia (1995) rightly points out that there does not exist a single perspective of the South Indian woman as women are positioned according to their caste and class, which heavily impacts their experiences and their understandings. For example, Rao (2018) writes that gender relations within landless households have historically been more egalitarian as a result of their poverty. The interaction of gender and caste in India results according to Busby (2000) to a closer alliance among women and men from the same caste compared to women belonging to different castes. At the same time, in villages dominated by a particular caste-group, gender is the main axis of difference around which daily life revolves (Busby, 2000). Gender ideologies in India are often patriarchal rather than egalitarian and men have the responsibility to protect women (Dube, 1997). Dube (1997) argues that this responsibility, generally portrayed as protection of women's sexuality, results in men exercising power over women's behaviour. This protection does not only refer to prevent potential unsafe situations, but arguably more so to prevent bad talk or gossip (Dube, 1997).

The socialisation of boys and of girls includes assuring boys they will inherit the house, the land, and that they will always have a home where they were born, while girls are taught they are only temporary members of the natal home as they will leave after marriage without much rights to any resources, even if they marry within their kin-group (Dube, 1997; Kapadia, 1995). In Hindu South Asia, women do not inherit property, but only have a right to maintenance (Dube, 1997). Although in some communities daughters can inherit self-acquired land if there are no brothers, this does not apply to ancestral land (Dube, 1997). Customarily, Tamil women could receive land, passing from mother to daughter upon their marriage so they could have an independent income (Mukund, 1992).

The gendered division of labour in Indian households results from the social expectation of men as providers, resulting in men's control over assets, while women are almost solely responsible for all household work (Kapadia, 1995; Rao, Pradhan and Roy, 2017). Gendered differences and gendered divisions of labour are most expressed in the years of marriage (Busby, 2000). Kabeer (1990) writes that in Bangladesh, the gendered division of labour within cultivating households is determined

by the norm for women to observe purdah and results in men appropriating women's labour. While purdah is not observed among Hindus in a similar way to Muslim communities, gender segregation does exist and is linked to caste hierarchy that is expressed in women's movements; from women remaining inside the home to working on their family's field to working on others' fields to working for wages outside the village (Dube, 1997).

There is a clear distinction between working in one's own field and working for wages in others' fields (Dube, 1997). In terms of paid work, men have benefited more from increased opportunities compared to women, although women have also benefitted from men's increased incomes (Heyer, 2014). There is a clear gender segregation in non-agricultural work, mainly due to women's continued responsibilities in child care and domestic work and due to women's difficulty to travel longer distances at odd hours (Dube, 1997). Men frequently control the labour and earnings of their wives (Kapadia, 1997), while simultaneously local employment opportunities for women are often scarce (Rao, 2014). Women from poorer economic sections are more likely to work as agricultural wage labourer (Dube, 1997). However, Heyer (2014) argues that a trend of Dalit women's withdrawal from paid labour does not necessarily mean stronger patriarchal control, but can also be the result of their improved economic circumstances. However, women's independent incomes do appear important. Busby (2000) found that South Indian fisher women who had an independent income not only facilitated the economic survival of the household, but also had significant power in decision-making around household resources.

3.4 Access to Land in India

Landownership, one of the few types of access to land recognised and enforceable by the government, increases access to government services, agricultural inputs, and credit which benefits household income and food security (Santos *et al.*, 2014). In India, landownership is closely connected to caste. Dominant high castes own most of the land, while lower socially disadvantaged castes, especially ST and SC communities, have only limited access to land, own little or no land, and lack tenure security (Besley *et al.*, 2016; Moses, 2003; Thangaraj, 2003). The position of ST and SC households is largely caused by social norms. Mangubhai (2014) argues that collective prejudice against ST and SC communities segregates them socially and spatially from other social groups. This social segregation results in state officials and dominant castes denying ST and SC communities their basic rights and rights on equality, including equal access to resources such as land, employment, and education (Mangubhai, 2014). Caste-based inequalities not only exist in landownership but also in size of landholdings owned. S. Rao (2017) writes that most farmers owning land of 2 hectares or less belong to SC, ST, and OBC households. Djurfeldt *et al.* (2008) argue that caste-based shifts in landownership are taking place as land transfers from high caste households, the primary landowners, to middle caste

and SC households do occur. Access to land is thus embedded in the caste system, with ST and SC communities lacking landownership, although there are signs of change.

Small-scale farming has not received the support it needed by institutions such as the World Bank, based on a general assumption that farmers, especially smallholders, would move away from agriculture to industry, leading to increased farm sizes (Christoplos and Pain, 2014; Li, 2010). However, most agricultural households in India are small and marginal farmers and landholdings continue to decrease in size due to intergenerational land fragmentation, making farms insufficient to meet subsistence (Christoplos and Pain, 2014; Harriss, 2013; Pritchard, Rammohan and Sekher, 2017). While average farm size in 1970-1 was 2.28 hectare, in 2005-6 this had decreased to 1.55 hectare (Mitra, 2014). More specifically, in 2003-4 30% of Indian rural households owned 0.4 hectare of land or less, 5% owned 3 hectares or more, and only 0.52% of Indian rural households owned over 10 hectares of land (Vikas Rawal, 2008 in Harriss, 2013). According to Christoplos and Pain (2014), this leaves farmers with no other choice but to diversify their livelihoods, while reinforcing smallholder production should be central in rural food security policies. Small-scale farming continues to be an important livelihood in rural India, with average farm sizes reducing because of intergenerational land fragmentation instead of increasing as a result of rural households moving away from agriculture and selling their land assets. Since access to land requires investments to translate this access into household food security, continued support by governments and financial institutions is a prerequisite.

Rural households who do not own arable land and whose livelihoods depend on agricultural wage labour have no security for food within a market of varying food prices (Sen, 1981). Agricultural wage labourers' dependency on agriculture remains high since off-farm employment opportunities are insufficient and agricultural wage labourers are not equipped with the relevant skills and education to move into other sectors (Mitra, 2014). Households who depend on agriculture without owning arable land therefore appear most vulnerable to food insecurity. However, landless households might still have access to land, including communal lands and forests, which play an important role in their livelihoods and as fall-back position, as mentioned previously, and thus contribute to their household's food security.

Caste not only plays an important role in landownership patterns but also in access to natural resources that are not privately owned. Environmental conservation policies by the Government of Tamil Nadu lack recognition of tribal communities' tenure rights, which resulted in tribal communities' restricted access to forests, leading to their economic degradation and forcing them into agricultural labour while continuing their struggle over land and forest rights (Chemmencheri, 2015; Saravanan, 2007). Community rights over forests and communal lands thus decreased, which especially hit the already vulnerable and landless ST and SC communities.

The Government of India recognised the economic and social importance of tenure rights through its Five Year Plans, starting with the First Five Year Plan in 1951, in which the government made commitments to land reform (Rao, 2006). According to Besley *et al.* (2016), South India's land reforms between 1940 and 1970 did not result in reduced inequality in tenure rights, in fact, landlessness among ST and SC communities increased. Indian legislation plays a role in reducing caste-based distribution of tenure rights with the Fifth Schedule of the Constitution, which states that ST lands cannot be transferred to people from other castes, although in Tamil Nadu this law against the alienation of ST lands is not enacted (Ministry of Tribal Affairs and United Nations Development Programme, 2016), and the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, which recognises tenure rights (individual and common) if proven that land or forest belonged to an individual or a community for at least three generations (Chemmencheri, 2015). Despite the government's commitments to increase tenure rights among vulnerable communities, caste-based inequality in access to land persists.

The Government of India did not recognise the importance of landownership for women until 1980 when the government drafted the Sixth Five Year Plan in which the government recommended registering reallocated land under the joint title of husband and wife (Rao, 2006). India's New Agricultural Policy publication in 2000 states that women will be granted property rights whenever possible and that women's Self-Help-Groups (SHGs) will be encouraged to regenerate wastelands (Rao, 2006). However, implementing the well-intended national policies and recommendations depends on the (political) willingness of the separate state governments (Goli and Maikho Apollo Pou, 2014). There are at least two challenges to land reforms' effectiveness in reducing socio-economic inequalities. First, successful land reforms are difficult as reallocating or privatising resources entails excluding previous users who did not obtain tenure rights (Meinzen-Dick *et al.*, 1997). As a result, control over reallocated or privatised resources is likely to be contested, especially when resources are scarce (Rao, 2006). Moses (2003) describes how higher castes contested land allocation to SC households by the government between early- and mid-20th century and resulted in gross loss of allocated lands by SC households. The role of power is such that when resources are taken from the powerful and reallocated to vulnerable communities, the powerful contest the reallocation and try to restore their resources, resulting in again loss of resources among the vulnerable. Second, the amount of land reallocated through land reform is only marginal and thus the impact of land reform is also only marginal. Most of the land in India is privately owned and transferred through inheritance (Agarwal, 1994) and thus landownership stays within the same families and same communities.

Agarwal (1994) argues that landownership is crucial for women's empowerment in South Asia. In rural areas, women and people from SC and ST communities have limited opportunities for non-

agricultural work (Rao, 2011a; Rao, Pradhan and Roy, 2017). As these social groups represent the poorest and most vulnerable sections of society, gaining landownership can contribute to their identity, dignity, and social inclusion (Pallas, 2011), and increase their economic independence; making them more secure against poverty as they have a resource to meet basic needs (Agarwal, 1994; Roy and Tisdell, 2002). Development policy aimed at gender equality and women's empowerment, such as access to credit, SHGs, and reservation of memberships, has according to Sahu (2018) not led to women's increased access and use of natural resources. Simultaneously, Vennila and Ramesh (2019) conclude in their study of three villages in Tamil Nadu that women's high participation in agriculture results from a shift in labour supply as men out-migrate for work, increased landownership among women, increased cultivation of labour-intensive crops, and women's increased diversity of agricultural tasks. This suggests women's high involvement in agriculture is not the result of increased power to gain control over land but resulted from men moving out of the agricultural sector. Despite women's involvement in agriculture, women lack recognition as being farmers, not only within the household but also by government, business, and development representatives (Rubin and Manfre, 2014), and results in agricultural policies failing to address the social and material disadvantages of women farmers (Rao, 2011a). These disadvantages are based in patriarchal institutions and severely affect women's participation in production and markets as independent farmers and their access to agricultural resources and services (Rao, 2011a; Rubin and Manfre, 2014). Women's lack of landownership and lack of recognition as farmers thus limit their opportunities to benefit from agricultural production and keeps women socio-economically disadvantaged.

On the other hand, Quisumbing *et al.* (2001) conclude that gender equality in landownership does not necessarily lead to gender equity or more efficient and productive farming for women farmers as long as other restrictions that women face, such as restrictive social norms, remain undealt with. De la Cadena (1995 in Rao, 2006) found that in the Peruvian Andes outmigration of men resulted in land losing its value as a source of income and power and led to increased landownership among women. Furthermore, Rao (2006) points out women's concerns that obtaining independent landownership would increase their work burden and responsibilities, while decreasing men's contributions to the household, leaving women with less time for cooking healthy meals. In rural India, agriculture also experienced a decline in economic and social value, which Jodhka and Kumar (2017) identified as main driver of local non-agricultural economic growth, while Pritchard, Rammohan and Sekher (2017) argue the opposite; that the decreased social value of landownership resulted from livelihood diversification, as the latter led to a decreased economic value of agriculture. Agriculture

thus becomes associated with low socio-economic status, and an increase in landownership does therefore not always reflect increased power.

Furthermore, men's greater opportunities for better paid non-agricultural employment results in men's greater contribution to household finance compared to women's low-wage agricultural incomes, motivating women to invest in their spousal relationships rather than claim landownership (Rao, Pradhan and Roy, 2017). This suggests that gendered economic inequalities result in women's unwillingness to risk their relationships with husbands by claiming ownership over land. Rao (2006) refers to a study by Heyer (1989) in which landless women in Tamil Nadu preferred investing in children's education or in social networks instead of in land, because landownership could restrain their mobility to find work. At the same time, women's increasing dependency on men because of gendered economic inequalities makes landownership for women exceedingly important (Santos *et al.*, 2014). Equal access to land in relation to gender and caste, among others, is an important goal, but it may not necessarily be a suitable instrument to achieve equality of power and labour value.

3.4.1 A Brief History on Land Registration in India

The historical development of land registration and revenue systems illustrates how classifications invented by governments have impacted property relations. Land systems of control and use of land within India are diverse and complex, but Dhanagre (1991), in his book 'Peasant movements in India, 1920-1950', summarises the development of land systems in India around the time the British arrived. He writes that Akbar, who reigned the Mughal Empire AD 1590, set up the first proper land revenue system in India. Although the nature of tenure rights for various classes is uncertain, an extensive system was created for collecting revenue from peasants, or *raiyyats*. *Zamindars* were chiefs, or local rulers, who collected revenue on behalf of the emperor in return for a share of the revenue. There was no market for land; cultivatable land was available in abundance and transferred through hereditary occupancy rights. The British substantially changed the agrarian and land systems during their long occupation of India. The British aimed to enlarge the land revenue by providing the *zamindars* with tenure rights to private lands over which they were only revenue collectors before. This change increased the *zamindars'* economic and political power, while *raiyyats* occupancy rights over land were no longer recognised. The British demanded high revenue, leaving the *zamindars* with little profit. Defaulting *zamindars* had their lands auctioned off, altering the relationship between the *zamindars* and the *raiyyats* into an oppressive one, with *zamindars* adopting various illegal methods to extract revenue from the *raiyyats*, deteriorating the latter's social and economic position. An increase in population growth made land scarce, and *raiyyats* could no longer afford to leave their land and resettle elsewhere. To pay revenue demands, the *raiyyats* needed to invest in agriculture and change

from subsistence crops to cash crops. They relied on moneylenders and loans given by *zamindars*, which created debts among the *raiyyats* and failure to repay meant surrendering their lands, thus strengthening the position of the moneylenders and the *zamindars* and pauperising the *raiyyats*. Between 1920 and 1950, peasant uprisings occurred in various parts of India, but they never led to a nation-wide peasant resistance movement. Although not all uprisings were successful, each led to minor legal reform or modification of land systems. Only from 1949-50 onwards, nation-wide land reforms changed the social, economic, and legal arrangements of land systems (Dhanagre, 1991).

The historical development of land systems in South India differs from the north. From the middle of the 9th century until the late 13th century, the Cholas ruled over an expanding territory that includes contemporary Tamil Nadu (Karashima, 2014). In the edited volume 'A Concise History of South India: Issues and Interpretations', the land system of this period is described meticulously. According to this volume, the Chola State had a well-developed revenue system, and the ruler Rajaraja I conducted land surveys by introducing a standard land measurement unit. Copper-plate inscriptions dating from the Rajaraja I rule indicate that there were two land taxes, *kadamai* (levied on landowners) and *kudimai* (levied on cultivators). Landholding in the early Chola period depended on two types of villages; the *ur*, the traditional peasant village, and the *brahmadeya*, villages created on fertile land granted to Brahmins by the king. In the *ur* villages, land was held in common and private landownership restricted to people of special service to the *ur*, such as dancers, astrologers, and controllers of irrigation sluices. Land in the *brahmadeya* villages was individually owned by the Brahmins. In the later Chola period, landholding patterns changed, and private landownership took off in the *ur* villages. This change came as Chola kings granted land, including *ur* land, to high officials, resulting in land transfers among individuals and consequently in the rise of big landlords (Karashima, 2014).

In the 18th and 19th centuries, *mirasi* rights presented the dominant form of landownership and control over labour, described in detail by Bandopadhyay (2009). A *mirasi* right holder was called a *mirasidar*, and the lands under the control of the *mirasidar* were given to tenants, *paiyirkkaris*, for cultivation. In return, the *mirasidar* received part of the produce or tenants paid rent. *Mirasi* rights over land were transferred through inheritance but could also be sold or bought. *Mirasi* rights do not provide exclusive rights to every aspect of the land concerned; they represent a form of a communal landholding system. There was a division in what the *mirasidar* has exclusive rights to and what the residents, *ulkudi*, and *paiyirkkaris* had exclusive rights to (Bandopadhyay, 2009). Early 19th century, the British controlled a large territory in the south, establishing the Madras Presidency (Kumar, 1965). In the Madras Presidency, the British introduced a *raiyyatwari* settlement, in which the *raiyyat* was a landholder or occupant with hereditary and transferable tenure rights, responsible for paying the

revenue directly to the state (Dhanagre, 1991). The *raiyyatwari* system was more beneficial to peasants compared to the *zamindar* system, as the former excluded big landlords in obtaining tenure rights, thus preventing big landlords gain controlling powers (Karashima, 2014). In the *raiyyatwari* system revenue demands also increased steeply, eventually outgrowing any other part of India (Kumar, 1965). Consequently, the *raiyyat* rented out their lands rather than cultivating it themselves, transforming the *raiyyatwari* system to resemble the *zamindari* system (Dhanagre, 1991). The most important impact of the *raiyyatwari* system on the traditional land system was the emphasis on individual landownership instead of the share system of use and access under *mirasi* rights (Karashima, 2014). Colonial individual landownership removed these shares, and the landholder received exclusive, monopolistic rights, recognised with a title deed, or *patta* (Karashima, 2014). Literature investigating *zamindars*, *mirasidars*, and *raiyyats* does not indicate whether these were always men, but presume women had no property rights in India until the Hindu Succession Act, 1956 (Mukund, 1992). However, records and temple inscriptions provide evidence that women had assets, and that they used their assets to build temples and to donate to temples, although these women belonged to particular communities, including Brahmin families, palace women, and temple women (Karashima, 2014).

Land registration and revenue systems in India throughout history thus recognised a diversity of arrangements in access to arable land and bundles of rights. A landowner had a unique status and bundle of rights that differed from a cultivator, and both recognised separately from someone who controlled land. Today, as I demonstrate in this dissertation, this recognition of diversity has disappeared on the administrative level, with the government lumping social units together in relation to access to land, making only a distinction based on ownership. Landowners are issued a title deed, a *patta*, which comes as individual *patta* or *kootu patta*. The latter is a joint title deed which can include two or more names from one or multiple households. Property registered as *kootu patta* can be considered common property, or a share system of use within households and within communities, but all these users are equal owners rather than various users with various user rights. The share in a *kootu patta* can be sold, but the value of homes with *kootu patta* is a fraction of the value with individual *patta*. Indeed, Veettil, Kjosavik and Ashok (2013) observed that private property systems are held in greater esteem compared to common property systems in South India, resulting in people willing to pay more for individual ownership titles compared to management rights over common land.

3.4.2 Property Inheritance Law

Succession for Hindu's was governed by the Hindu Succession Act, 1956 (HSA) in which property was divided into joint property and individual property (Heath and Tan, 2020; Mookerjee, 2019). Joint family property includes ancestral property and property otherwise aquired, but incorporated into the

joint property (Agarwal, 1995; Bhalotra, Brulé and Roy, 2020). Joint property was inherited by coparcenary, generally only men, while “individual property could be bequeathed at will” (Heath and Tan, 2020, p. 1943). Daughters and widows could only inherit joint property if there were no male coparcenary (Heath and Tan, 2020). The HSA granted sons, daughters, and wives to inherit equal shares in individual property of the deceased (Heath and Tan, 2020; Khan, 2000; Patel, 2006). The HSA applied only in situations of men dying intestate (Heath and Tan, 2020) and covered approximately 86% of the Indian people (Agarwal, 1994); Muslims, Christians, Parsis, and Jews did not fall under the HSA. Inheritance for Muslim women in India falls under the Shariat Laws (Application) Act 1937 in which women inherit property as defined in the Quran, which is half of what men inherit (Rao, 2007; Saxena and Parthasarathy, 2016). This half share applies to daughters of the deceased as well as to the widow (Khan, 2000). In practice, Muslim women are denied any right to inherit land (Khan, 2000; Saxena and Parthasarathy, 2016).

The HSA retained several important aspects of gender inequality (Agarwal, 1995). The HSA excluded daughters and wives to inherit joint property (Deininger, Goyal and Nagarajan, 2010; Heath and Tan, 2020; Mookerjee, 2019; Rao, 2011a; Roy, 2015) and agricultural land (Agarwal, 1995; Rao, 2007). Moreover, this law changed little in practice (Dube, 1997; Patel, 2006). A daughter’s wedding expenses, including dowry gifts, were considered a substitute for their inheritance of joint as well as separate property, and a woman who claimed her share of property risked her relationship with her brother (Dube, 1997). Only in widowhood did a woman have a right to a share of her husband’s resources and self-acquired property (Dube, 1997).

A small number of states amended the HSA. The Government of Tamil Nadu had amended the HSA in 1989 with The Hindu Succession (Tamil Nadu Amendment) Act, 1989, making unmarried daughters coparceners, thus giving them entitlements to inherit joint family property, but this still excluded daughters who got married before the amendment came into force (Agarwal, 1995; Agarwal, Anthwal and Mahesh, 2021; Bhalotra, Brulé and Roy, 2020; Heath and Tan, 2020; Mookerjee, 2019). With daughters now coparceners, daughters’ share in property can no longer be willed away by the father (Deininger, Goyal and Nagarajan, 2010). The Government of India only amended the Hindu Succession Act in 2005 to give sons and daughters equal rights to inheritance in agricultural land (Rao, 2011a, 2007; Velayudhan, 2009) and to include the inheritance rights of already married daughters (Rao, 2007; Velayudhan, 2009). However, on the ground the situation is still quite different (Agarwal, 1994; Velayudhan, 2009). For widows, importantly, none of the amendments made any changes in their lack of inheritance rights in joint property (Deininger, Goyal and Nagarajan, 2010).

3.4.3 Landownership and Land Use in Tamil Nadu

In rural Tamil Nadu, not all households own land, nor do all households own a house (see Table 3.1). In fact, between 2005-06 and 2015-16, landlessness among rural households in Tamil Nadu increased by 4.8% (Government of India, 2017b). Table 3.1 shows that ownership of land as well as ownership of houses are clearly dominated by men.

	Owning land (%)	Owning a house (%)
households	30.9	89.6
women	28.4	36.4
men	65.4	86.2

Table 3.1 Ownership of land and house in rural Tamil Nadu 2015-16. Source: National Family Health Survey 2015-16 (NFHS-4).

Tamil Nadu planned land reforms for over 50 years, but landownership remains dominated by upper castes (Besley *et al.*, 2016; Mangubhai, 2014). The Agriculture Census 2015-16 shows that ST communities in Tamil Nadu own 1.3% of all arable land while representing 2% of the total population, and less than 14% of arable land is owned by SC communities while they make up 27% of the total population. For Salem District in 2015-16, ST communities (3.4% of Salem's total population in 2011) own 7.7% of all arable land and SC communities (16.7% of Salem's total population in 2011) own 4% of all arable land (Agriculture Census Division, no date). In 2006, India adopted the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act to recover and secure traditional communal natural resources. However, by 2010, the government had granted less than 3% of almost 49 000 community claims, as the government required official tenure documents, which rarely exist for these traditional territories (Tobin, 2014). Land is an important household asset, but the value of these land assets is substantially lower among ST and SC households compared to households from other communities because of differences in land size, land quality, and land development (National Sample Survey Organisation, 2006).

Landownership in Tamil Nadu is not only associated with specific communities but is also highly gendered, as Table 3.1 already suggested. The National Family Health Survey 2015-16 (NFHS-4) indicates that 28.4% of women in rural Tamil Nadu own land and 36.4% of women own a house, compared to 65.4% of men owning land and 86.2% of men owning a house. Table 3.2 shows the number and area of agricultural landholdings operated by women in Tamil Nadu for the earliest record in the Agriculture Census (1995-96) and the most recent record for 2015-16 and the percentage change in number and area of holdings between these years. In 2015-16 women individually operated 19.7% of all agricultural landholdings, covering 17.8% of the total arable land. Women thus not only operated fewer landholdings compared to men, but the landholdings were also smaller. Comparing 1995-96 with 2015-16, the total number and area of landholdings decreased (with 1.04% and 19.02%, respectively), while there was an increase in number and area of landholdings operated by women.

The increase in number of landholdings is particularly high for ST women, while for SC women the area operated actually increased more compared to the number of holdings, suggesting there was a slight increase in average size of the landholdings operated by SC women.

Operational landholdings in Tamil Nadu						
	1995-96 number	1995-96 area	2015-16 number	2015-16 area	Increase number (%)	Increase area (%)
Total	7950188	7158491	7867364	5796931	-1.04	-19.02
All women	1310603	1016953	1552778	1031346	18.48	1.42
SC women	145239	78056	167063	95313	15.03	22.11
ST women	8647	9057	15186	11313	75.62	24.91

Table 3.2. Agricultural landholdings operated individually in Tamil Nadu. Source: Agriculture Census Division.

Table 3.3 also shows the number and area of agricultural landholdings operated by women and the percentage change in number and area of holdings between these years, but only for Salem District. The earliest record in the Agriculture Census for Salem District is 2000-01 and the most recent record is 2015-16. In 2015-16, women in Salem District individually operated 19% of all agricultural landholdings, covering 17.3% of the total arable land. This does not differ much from Tamil Nadu overall. Comparing 2000-01 with 2015-16, the total number of landholdings increased with 8.76%, while the total area of landholdings decreased with 3.18%. The number and area of landholdings operated by women increased between 2000-01 and 2015-16, with the highest increases among ST women.

Operational landholdings in Salem						
	2000-01 number	2000-01 area	2015-16 number	2015-16 area	Increase number (%)	Increase area (%)
Total	304700	269775	331404	259252	8.76	-3.18
All women	54521	43275	62890	44922	15.35	2.62
SC women	3265	2046	3681	2168	12.74	3.31
ST women	3398	3142	4308	3716	26.78	13.32

Table 3.3. Agricultural landholdings operated individually in Salem. Source: Agriculture Census Division.

The increase in number and area of landholdings operated by women for different castes clearly differs, which also means that the distribution of land among men and women within each caste is different. Table 3.4 shows the percentage of agricultural lands operated by women within each caste. The table shows that 19.7% of all landholdings are operated by women in 2015-16, but the percentage of landholdings operated by women is slightly higher among SC landholdings (21%) and lower among ST landholdings (16.1%). This means that there is higher gender inequality in

operational landholdings among the ST community compared to Tamil Nadu overall, and slightly less gender inequality in operational landholdings among the SC community compared to Tamil Nadu overall. The pattern is the same in Salem District, although in comparison to Tamil Nadu the percentages of landholdings operated by women are higher for SC and ST communities and lower for women overall. Thus, for both Tamil Nadu and Salem District, there is an increasing trend visible in the number and area of landholdings operated by women for all caste groups. However, the increase in landholdings operated by women has not been equal among all castes and has been highest among SC and ST communities.

	Tamil Nadu		Salem District	
	1995-96 (%)	2015-16 (%)	2000-01 (%)	2015-16 (%)
All women	16.5	19.7	17.9	19.0
SC women	16.1	21.0	19.0	21.2
ST women	14.0	16.1	18.2	20.6

Table 3.4. Agricultural landholdings operated by women. Source: Agriculture Census Division.

Initiatives by the Government of Tamil Nadu aimed at gender equality focus on benefits for women, including making credit available, training in farm-management, agricultural marketing and value-adding, distributing farm equipment and machinery, and motivating women farmers to form associations (State Planning Commission Chennai, 2012). These initiatives, although achievable, focus on economic growth rather than on equality in landownership. These government initiatives are only relevant to women who have access to arable land. The Access to Justice Survey 2015-16 found that 66.2% of cases brought to the justice system relate to land or property (69% among men and 57% among women), while only 15.1% of all Indians who use the justice system are women (Daksh India, 2016). Women are thus less likely compared to men to use the justice system to solve land disputes.

Access to arable land is a pre-requisite for cultivation. Based on data from the 2011 census, more than 40% of Tamil Nadu's population depends on agriculture for their livelihood (Government of Tamil Nadu, 2019c). Between 1995-96 and 2015-16, the total area of arable land in Tamil Nadu reduced with 19%, while the total number of agricultural landholdings reduced only with 1% (Agriculture Census Division, no date). SC and ST communities have a higher dependence on agriculture (66% and 80%, respectively) compared to the other communities (53%) (State Planning Commission Chennai, 2012). Table 3.5 shows that most farmers cultivate marginal landholdings and Tamil Nadu as a whole and Salem District show similar patterns in the prevalence of agricultural landholding sizes.

	Tamil Nadu (2010-11) (%)	Salem District (2011) (%)
Marginal	77	73
Small	15	19
Big	8	8

Table 3.5. Size of agricultural landholdings in Tamil Nadu and Salem District. Sources: State Planning Commission Chennai, 2012 and State Planning Commission Tamil Nadu, 2017.

The implication of this unequal distribution is that in Salem District 33% of arable land is controlled within only 8% of all landholdings. The proportion of marginal landholdings in Salem District is growing, as in 2001 only 71% of landholdings were marginal landholdings (State Planning Commission Tamil Nadu, 2017). Decreasing landholding sizes result from encroachment onto and conversion of arable lands into residential space (land for non-agricultural use increased from 9.8% in the 1950s to 16.17% in the 2000s) and intergenerational land fragmentation (State Planning Commission Chennai, 2012). Approaches proposed by the Government of Tamil Nadu to counter the latter is land consolidation among marginal and small farmers, promoting community-based farming, and providing women's SHGs with wastelands and fallow lands on a lease basis (State Planning Commission Chennai, 2012). These approaches do not address the problem of decreasing land size but shift the pressure on land from the individual to the group or community.

Not all land is arable land. In Tamil Nadu, forests form 16,3% of Tamil Nadu's landcover and 0,84% of land is permanent pasture or grazing land (Government of India, 2017a). In Salem District, the total land area is 520 530 hectares, of which 51% is arable land, 24% is forest, and 0.8% is pasture or permanent grazing land (Government of India, no date).

3.5 Food Security in India

The India State Hunger Index, composed by Menon, Deolalikar and Bhaskar (2009), compares India's States in levels of hunger, measured through inadequate consumption, child underweight, and child mortality. Although Tamil Nadu ranks 6th (out of 17), the current state of hunger is considered 'alarming' since 29.1% of Tamil Nadu's population has calorie undernourishment; higher than the national average (20%). The NFHS-4 indicates that nutritional status of children under 5 in Tamil Nadu improved in the 10 years since the National Family Health Survey 2005-06 (NFHS-3), but still 27% of children under 5 is stunted, indicating undernourishment for some time, 20% wasted (8% severely), indicating recent undernourishment or illness, and 24% underweight. Not only children suffer from nutrition related health problems. Table 3.6 shows that overweight is a more prevalent health problem compared to underweight for women as well as for men. According to the NFHS-4, undernutrition is more common among young adults, in rural areas, and among SC and ST communities, while overweight and obesity are more common among older adults and in urban areas. Anaemia is a major health problem in rural Salem District, especially among women, and in at least

half the cases the anaemia is linked to inadequate nutrition (Government of India, 2017b). Insufficient nutrition thus manifests in various health problems with gendered and generational differences.

	Rural Tamil Nadu		Rural Salem District	
	Men (%)	Women (%)	Men (%)	Women (%)
Underweight	12	15	14.4	12.8
Overweight	28	31	30.6	23.8
Anaemia	24.3	56.8	29.8	56.6

Table 3.6. Nutrition related health problems in rural Tamil Nadu and Rural Salem District for 2015-16. Source: NFHS-4.

Estimates of the number of food insecure households in India are uncertain according to Tandon and Landes (2011), but using household consumption data for 2004-5 from the 61st round of the National Sample Survey, they estimate that at least 60% of India's total population is food insecure. There is no estimate for the number of food insecure households in Tamil Nadu, nor for Salem District. The twelfth Five Year Plan of the Government of Tamil Nadu mentions 'nutrition security' and a 'malnutrition free state' as important goals, achieved through government entitlements such as Mid-Day-Meal schemes at government schools and *Anganwadi*, and food rations through the Public Distribution System (PDS) (State Planning Commission Chennai, 2012). The NFHS-4 shows that 59% of children below the age of six in Tamil Nadu receive supplementary food at *Anganwadi*. Not all social groups equally take part in this programme; there are religious differences (Hindu 59.8%, Muslim 43.8%, Christian 49.7%) and caste differences (SC 66.1%, ST 58.3%, OBC 55.7%, and Other 36.9%). Pregnant and breastfeeding mothers can also receive Mid-Day-Meals at *Anganwadi*, and mothers who are unschooled, Hindu, or SC are more likely to take part in this Mid-Day-Meal scheme. Comparing body mass index and anaemia prevalence, these women do not appear to be more undernourished or less food secure compared to other groups of women (Government of India, 2017b). While the exact number of food insecure households is unknown and clear evidence on the vulnerability of diverse social groups to food insecurity is absent, the Government of Tamil Nadu acknowledges the problem and offers food entitlements. However, as the extent and the details of the problem are unknown, the contributions of these food entitlements towards a 'malnutrition free state' can only be speculation.

3.5.1 Food Security Policy

Theory on food security emphasised the four pillars of food security: availability, accessibility, stability, and utility. However, on a policy level, the interaction of these four pillars is not always recognised. National food security in India poses a continuous and dynamic struggle that depends on political, environmental, and economic factors. India's policies for national food security focussed on increasing agricultural production. After independence in 1947, India's centralised development policies focussed on becoming self-sufficient for staple foods such as rice and wheat (Gurung and Gilmour, 2008). Throughout the 1950s and early 1960s India still relied on food aid from the United States

(Pritchard *et al.*, 2014). This changed in 1962 with the introduction of the first High-Yield Varieties (HYVs) of wheat, and later also rice, marking the start of India's Green Revolution (Gurung and Gilmour, 2008; Mitra, 2014; Pritchard *et al.*, 2014).

Along with an increased use of HYVs seeds, the Government of India set up grain production targets for states and restricted trade (Gurung and Gilmour, 2008). Development policies focussed on expanding irrigation, promotion of chemical fertilisers and pesticides, and improved access to credit (Gurung and Gilmour, 2008; Springer, 2000). These policies increased agricultural production and eventually made India self-sufficient in food grain production (Gurung and Gilmour, 2008). Production of wheat and rice, India's staple food, nearly doubled by the 1980s (Gillespie, Harris and Kadiyala, 2012; Patnaik, 2005), but after mid-1980 growth in agricultural production slowed (Gurung and Gilmour, 2008). While the outcomes of the Green Revolution in terms of food security are generally positive, not everyone benefitted equally. First, the Indian government restricted implementation of Green Revolution technologies to key target areas, Haryana and western Uttar Pradesh, thus resulting in only a small geographical area benefitting from the effects of HYVs (Pritchard *et al.*, 2014). Second, not all farmers in these key areas could equally access HYVs and related implements, creating bigger socio-economic differences among farmers, and new forms of social exclusion (Pritchard *et al.*, 2014). In the early 1990s, a liberalised agricultural trade policy decreased public sector investments, negatively affecting India's agricultural productivity and growth (Chand, 2004a; Mitra, 2014; Patnaik, 2005). The rural population dependent on agriculture for their livelihood only marginally decreased between 1996 and 2005, which led to greater social inequalities (Rao, 2011a). These liberalised agricultural policies reversed according to Patnaik (2005) the success of the Green Revolution in raising grain availability, which primarily affected rural populations. The neoliberal reforms resulted in crop diversification, especially among smallholders, in which cash-crops overgrew locally consumed subsistence-crops (Gillespie, Harris and Kadiyala, 2012; Patnaik, 2005; Rao, 2006). Headey and Hoddinott (2016) refer to several studies demonstrating the negative impact of the Green Revolution, particularly of mono-cropping, on individuals' dietary and nutrient diversity. Meinzen-Dick *et al.* (1997) question whether cash-crops are as valuable as a monetary equivalent in food-crops, since cash-crops convert into cash, usually controlled by men, while women prepare food-crops for consumption and directly enhance household food security. The policies of the 1990s thus changed the agricultural landscape, which did not benefit rural households' food security and widened social inequalities.

In 2000, India introduced its first policy statement on agriculture, the National Agricultural Policy, in which India aims for an annual growth rate of 4% between 2000 and 2020 (Gurung and Gilmour, 2008). However, Gurung and Gilmour (2008) argue that there have not been any concrete

actions towards implementing these policies, nor any concrete approaches to reverse the declining investments in agriculture. The National Agricultural Policy pays attention to food and nutrition security, but emphasises increased food production rather than food affordability, while Chand (2004b) argues the latter is the bigger challenge for India's food security.

National food security policy aimed to increase food production. Meanwhile, policies for household food security focussed on food provisions (Pingali, Mitra and Rahman, 2017). Efforts by the Government of India to combat household food insecurity include policies and transfer entitlements such as the PDS, introduced in the mid-1960s, to provide subsidised wheat and rice for each household (Pritchard *et al.*, 2014), and the Mid-Day-Meal scheme, launched in 1995, which provides free lunches to children and lactating mothers (Bala Ramulu, 2016; Santos *et al.*, 2014). In 2012, Tamil Nadu had 33 222 Fair Price Shops distributing subsidised food as part of the PDS, serving 1.98 million families (State Planning Commission Chennai, 2012). Despite these and other developments addressing food insecurity in India over the last decades, household food insecurity persists.

In 2001, first initiatives towards the 'right to food' were taken in India when a group of public interest lawyers sued the government for failing to meet legal obligations to "supply famine relief to people afflicted by drought, although government warehouses were well stocked with grain" (Li, 2010, p.82). The Supreme Court confirmed Indian citizens have a 'right to food' and oversaw the development of national programmes through which the government could deliver its obligations (Li, 2010). These programmes, which included free lunches for every school child, free lunches for pre-schoolers at *Anganwadi*, elderly pensions, and food rations through PDS, received various levels of criticism regarding implementation, effectiveness, and reach of beneficiaries (Li, 2010; Rao, Pradhan and Roy, 2017; Santos *et al.*, 2014).

In 2009, national legislation first supported the 'right to food', a concept mainly used in international treaties and humanitarian law, when the Congress-Party-led United Progressive Alliance was elected into government and started to work on a Food Security Bill (Pritchard *et al.*, 2014). Eventually the National Food Security Act, 2013 (NFSA) was published "to provide for food and nutritional security in human life cycle approach, by ensuring access to adequate quantity of quality food at affordable prices to people to live a life with dignity and for matters connected therewith or incidental thereto" (Government of India, 2013, p.1). The NFSA provides subsidised food grains for coverage of up to 75% of the rural and 50% of the urban population, at the all-India level. Tamil Nadu was, along with Kerala, the last state to implement the NFSA, in November 2016 (Puri, 2017). The NFSA currently covers 357.34 *lakh* persons in Tamil Nadu (Rajya Sabha, 2016b), comprising 49.5% of

the total population (62.55% of the rural population, and 37.79% of the urban population) (Rajya Sabha, 2016a) as according to the 2011 census.

The NFSA was passed in addition to the existing Public Distribution System, which provided 67% of India's households with food grains for subsidised prices (Mitra, 2014; Pritchard *et al.*, 2014). With the new NFSA, PDS became targeted at vulnerable populations and food security was no longer only policy, but state law which equally applies to all citizens (Bala Ramulu, 2016; Pritchard *et al.*, 2014). While courts administer laws, Pritchard *et al.* (2014) convincingly argue that the 'right to food' means nothing unless people can actually ensure this right is met. However, Puri (2017) found that the majority of Indian states do not have a functional independent body through which people can submit a redress of grievances. Consequently, no mechanism exists to report violations of rights granted by the NFSA. The NFSA focusses entirely on food distribution, little to no attention is paid to achieving individual food security through self-reliance or improved livelihoods.

The unsustainability of the agricultural sector as source of livelihood expresses itself, according to Rao, Pradhan and Roy (2017), in the increasing incidence of farmer suicides and men migrating to urban areas in search for non-agricultural employment. However, source of livelihood is not the only socio-economic indicator of inequality in food security. Based on findings from the National Nutrition Monitoring Bureau (NNMB 2012), Rao, Pradhan and Roy (2017) found a significant difference in nutritional status among social groups based on caste, ethnicity, and religion. The groups of people most vulnerable to food insecurity and undernutrition, according to Gillespie, Harris and Kadiyala (2012), are poor households, ST and SC households, and rural households. Data collected by the Government of India in 2009 situates 37.2% of India's households as living below the poverty line, and nearly 99% of these households belong to ST and SC communities (Mitra, 2014). Food insecurity thus seems to be more prominent among rural SC and ST households.

In South Asian countries, food security and malnutrition have strong gender differences (Sraboni *et al.*, 2014). Pritchard, Rammohan and Sekher (2017) refer to studies that demonstrate that undernutrition in India is more prevalent among women compared to men. Rao, Pradhan and Roy (2017), on the other hand, based their study on data from the National Nutrition Monitoring Bureau and found no significant nutritional difference between men and women, except "at particular stages in the life cycle" (2017, p.7). Their findings furthermore illustrated that unequal labour opportunities intensify food insecurity; 90% of rural working women work in the low-wage agricultural sector compared to 71% of men. More than half of these women belong to ST or SC communities, while ST and SC women represent only approximately a quarter of the total population (Rao, Pradhan and Roy, 2017). Pritchard, Rammohan and Sekher (2017) found evidence that agricultural wage labourers eat less diverse, especially lacking protein-rich foods, compared to farming households and households

whose main livelihood is non-agricultural. Gender differences linking labour opportunities to food security are thus embedded in caste inequalities.

3.6 The Village: Katuyanur

Katuyanur is a small village surrounded on three sides by the hilly Katuyanur Reserved Forest (see Map 3.3). Towards the late 19th century, the area around Katuyanur came under control of a Danish missionary. He employed many tribal (ST) families, Malayalis, to work on his lands. These Malayali families had left their houses and lands in the hills to come work on the lands of this Danish missionary. Around the time of India's independence on 15 August 1947, the Dane gave the lands to the Malayali families who had been working and living there. Other Malayali families used their savings to buy land in the area. Until 40-50 years ago, the only households in Katuyanur were Malayali households. Local narratives indicate that many Malayali families lost their lands because of starvation in the area, which forced families to sell their lands or exchange it for food. Writing about this same period, Gough (1982) confirmed that South India was characterised by droughts, resulting in bad harvests and food shortages, and Nathan (1998) identified 1979, 1982, 1986, 1987, and 1989 as years in which Tamil Nadu experienced severe and chronic droughts. The local Malayali families who were forced to sell their land did not get much for it for several reasons. First, they were desperate because of their destitution and starvation. Second, the local Malayali community was uneducated and unaware of the land value, and thus easily persuaded into a sale. Third, large sections of the land were uncultivated, and the new owners needed to clear these lands to make it suitable for cultivation. Families who bought these lands were from BC and MBC communities, who often sold land they owned elsewhere to buy larger and cheaper lands in the tribal, starvation-stricken area of Katuyanur. The now landless Malayali households resettled on a small stretch of land owned by a relative. Descendants of the Malayali families who sold their landed property now work as agricultural wage labourers on these same lands. Not all Malayali households in Katuyanur used to be landowners, some of the current villagers' ancestors came from hill areas to settle in Katuyanur after marriage or for agricultural work, but never received or bought land.

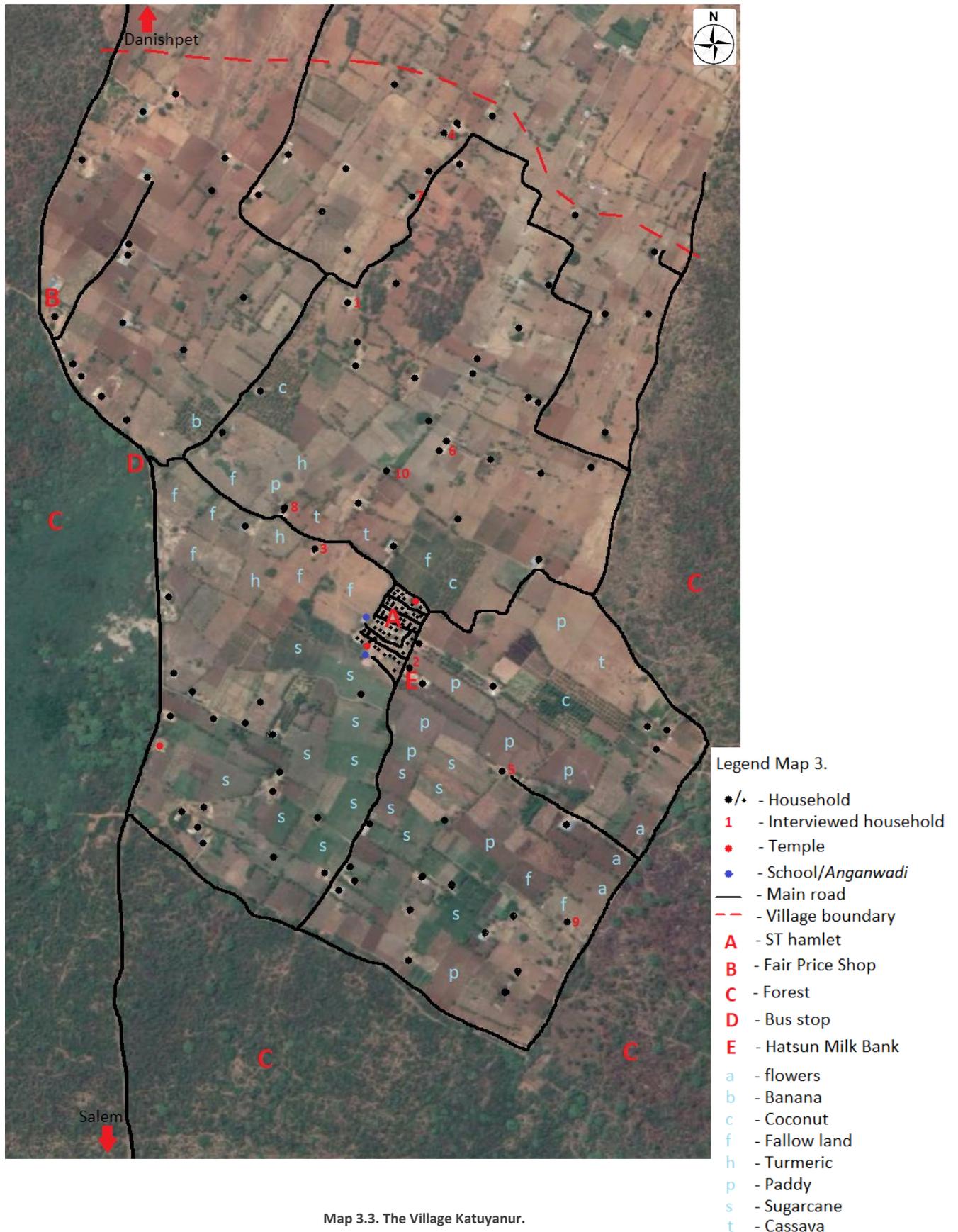
Most land in Katuyanur is privately owned land. The local VAO stated that the entire Panchayat Village, which includes Katuyanur, contains 1750 land and housing *pattas*. The sex of the *patta* holder(s) is not recorded in the government's land records, but he estimated that between 200 and 300 *pattas* are registered in women's names. Despite the influx of BC and MBC households, the majority of Katuyanur's population of approximately 800 is Malayali, most of whom are relatives. Katuyanur consists of 178 households: 16 BC, 61 MBC, 12 SC, and 89 ST. All households are Hindu. The village comprises a dense hamlet of 59 houses at its centre (see **A** in Map 3.3) and arable lands surrounding this hamlet where the remaining 119 households have their homes. The entire population

of the hamlet belongs to the Malayali community, none of whom own arable land. A few of these households, however, do have access to arable land through relatives. Among the landowning households, the population is a mix of castes (16 BC, 61 MBC, 12 SC, and 30 ST) with the majority MBC households.

The ST hamlet is a rectangle in shape with houses aligned in six parallel streets. Locals refer to the arable lands around the ST hamlet as Katuyanur Kaathu Valavu. The villagers who own these arable lands have their homes build there rather than in the ST hamlet. The small stretch of land that had become the landless ST hamlet soon became too small for the increasing population. Many households had multiple sons, each of whom started their own household with no place to go as there was no land available to build new homes. Between 15 and 20 years ago the government acquired land adjacent to the ST hamlet and donated 3 cents of land with *patta* to each existing household. The government registered these housing plots only in women's names, with the condition that they could only transfer the land to someone else (anyone else) after 30 years. The ST hamlet now comprises the old village with 21 houses and the new village with 38 houses. The housing plots in the old part of the hamlet have either individual *patta* (2 houses), *kootu patta* (15 houses), or are *poramboke* land (4 houses), while every house in the new part of the hamlet is built on housing land registered under individual *pattas*. Visually, the two parts of the hamlet contrast sharply. The houses in the old part are old, small, and built in an old style with tiled pointed roofs or thatched roofs. In comparison, the houses in the new part are bigger, modern, have flat roofs with roof terraces, and built with the help of the government's Housing-For-All scheme. This scheme is a conditional government entitlement, available only for households with a *patta* issued in a woman's name, and offers a Rs.2 lakh subsidy to build a house.

In the ST hamlet, every house has a water connection. This water is provided by the local government, the Panchayat, who installed the bore-well, a water storage tower, a pump house, and a network of pipelines. The former village president oversees the pump house, therefore the key is in his house and only the people from his household turn the motor on, once in the morning, and once in the evening. From a water storage tower in the north-east corner of the village, pipelines run underneath the streets to connect all houses within the ST hamlet. Only a few pipelines run along the main road to houses outside the ST hamlet. Most houses in Katuyanur Kaathu Valavu are not connected to the Panchayat water but depend on their own wells or bore-wells. Two informants living outside the ST hamlet do not have a well on their land and thus no access to water. Therefore, they must walk back-and-forth between their home and the ST hamlet to bring water home in *kodams*. For one informant this was an important reason for her household to leave their home in their own land

and move to the ST hamlet into a rented house. Most houses have a private toilet, with a few exceptions in the old part of the ST hamlet.



Map 3.3. The Village Katuyanur.

Although Katuyanur mainly comprises housing and arable land, the village also contains a government primary school and an *Anganwadi*, both inside the ST hamlet, and three temple buildings. Two temples are inside the ST hamlet and one temple stands along the main road leading to the nearest town 3 km away. There is no permanent river in the village, but a reservoir in the forest fills up with water during the rainy season from which a seasonal river flows to the lower parts of the forest where it fills a big, but shallow, lake with water. At a 10-minute walk from the ST hamlet, at the main road, there is a bus stop serviced by a recently introduced government bus line connecting the village with Salem (see **D** in Map 3.3). The bus ride takes 1 hour and 15 minutes and the route runs straight through the Reserved Forest using a narrow unpaved road restricted to authorised traffic only, guarded at the Salem entrance by the Forest Department. Twice a day a bus makes a return trip between Salem and Katuyanur; reaching Katuyanur from Salem at 7.30am, passing the village again half an hour later, on its return to Salem, and again in the evening at 6.30pm. Other bus services run from the nearest town at 3km distance from Katuyanur.

Daily life in the village follows clear routines. In the early morning, when the Panchayat water reservoir is opened, from all directions you can hear clothes slapping on hard surfaces as women do laundry. The local shop is busy with children and adults, mostly women, buying ingredients to prepare coffee, tea, breakfast, and lunch. Between 6am and 7am villagers who keep cows bring their cows' milk to the local milk bank. Men and women go out for work around 7.30am, leaving around the same time as children in secondary school and those who attend college, while primary school children go to the village school around 8.30am when they again come to the shop to buy sweets and snacks. During the day the hamlet is silent. Agricultural wage labourers come home for an hour around 11am for breakfast while their workday finishes after 3pm. Adults who do not work outside the home pass the day doing housework or watching television. Between 3pm and 4pm, cow keepers again bring milk to the milk bank and at 4pm the village school is out, and children go home and play outside. Villagers who do not have cows visit other households with cows to buy milk in time for afternoon tea, taking plastic bottles with them to transport the milk. From 4pm onwards the shop becomes busy again as children come to buy sweets, tea, coffee, sugar, and biscuits. In the evening the Panchayat water reservoir opens again, so echoing sounds of women doing laundry fills the evenings. Around 6pm it gets dark, and dinner is prepared in most houses while other household members return home from work, secondary school, and college. The village streets then become quieter, with few people coming to visit the shop for cooking ingredients for dinner.

3.6.1 Agriculture in Katuyanur

Before the BC and MBC families bought the Malayali lands and settled in Katuyanur, much of these lands were uncultivated and a wilderness of shrubs, thorn bushes, and rocks. The BC and MBC farmers

cleared the lands and introduced irrigation facilities and farming machinery. One middle-aged ST woman explained that when the other communities bought the Malayali lands 40-50 years ago, they introduced different ways of farming; they had more to invest, and that is when the surroundings transformed from wilderness to cultivated lands with various crops. Now all the land has been converted into arable land. A great variety of trees used to grow on these lands, now replaced by coconut trees. No paved roads led into Katuyanur Kaathu Valavu until recently.

The primary crops cultivated in Katuyanur are sugarcane, cassava, banana, turmeric, and *solam*. These crops have replaced paddy, millets, vegetables, grains, and groundnut. Increased household expenses over the past decades, mainly for education, phone, electricity, and television bills, petrol, and repayments of loans, caused a shift in cultivation from subsistence to commercial crops. While farmers would prefer to grow subsistence crops, at least on a small part of their land, the need for money and low financial returns on subsistence crops results in most farmers sticking to commercial crops. Farmers do cultivate paddy, providing they have enough water for irrigation, so they need not buy rice. Crops cultivated for sale are turmeric, sugarcane, groundnut, tomato, flowers, cassava, banana, coconut, and cotton. Crops cultivated for home consumption are paddy, millet varieties, and pulses. Paddy used to be a minor crop in Katuyanur and surroundings, but with the introduction of irrigation facilities, paddy cultivation overtook rain-fed millets and pulses. This change had an amplifying effect as farmers had taken loans to install these irrigation facilities and to repay the loans they shifted towards commercial crops. As a result, similar to the Malayali communities in the Kolli Hills (Finnis, 2007, 2006), farmers now produce for the market and simultaneously depend on the market for their own food consumption.

The main crops grown in Katuyanur are shown in Map 3.3. These main crops are grown by different farmers, during different seasons, and require different kinds of labourers and different intensity of labour. Cropping patterns are typically local as changing cropping patterns requires experimentation and looking at successful neighbours. The introduction of new crops in the area is usually only an option for big farmers who can risk losing a crop if an experiment is unsuccessful. The choice for crops that require less labour compared to 'traditional' crops is largely a result of farmers' own decision-making based on their own preferences, desires, and environmental knowledge rather than external factors only, like government schemes or market fluctuations, similar to what Finnis (2006) describes for Malayali farmers who are increasingly growing tapioca in the Kolli Hills, near Salem district. An overview of the main crops cultivated in Katuyanur is given in Table 3.7. The classification of labour intensity is based on information obtained through interviews and conversations in the fields or retrieved from the Tamil Nadu Agricultural University website.

Crop	Seasonality	Land variables	Labour requirements
Cassava/ tapioca	Growing and harvesting takes 7-8 months Planting in December or January	Small and big farmers with irrigation facilities	Not very labour intensive Women: planting, weeding, irrigating, harvesting Men: ploughing, irrigating, harvesting
Banana	Growing and harvesting takes more than 12 months Planting between November and February	Big farmers, irrigation facilities preferred	Labour intensive Women: regular weeding and irrigating Men: ploughing, irrigating, harvesting
Coconut	Permanent growth. Harvest after 7 months (tender) up to max 12 months. Sometimes intercropped with cassava	Big farmers, irrigation facilities preferred	Not labour intensive Men: Harvesting (usually contracted)
Flowers	Planting in April/May Harvesting between September - December	Big farmers with irrigation facilities	Labour intensive Women: regular weeding, irrigating, and flower picking Men: ploughing, irrigating, spraying chemicals
Groundnut	Planting in June/July Harvesting after 3-4 months	Small farmers, irrigation facilities not necessary	Not very labour intensive Women: bed preparation, sowing, weeding, harvesting Men: ploughing, fertilising, spraying chemicals
Millets	Sowing between August and October, harvesting after approximately 6 months	Marginal and small farmers without irrigation	Not labour intensive Women: sowing, weeding, harvesting, threshing Men: ploughing, fertilising
Paddy	One or two crops per year between May and January, harvesting after approximately 3 months	Small and big farmers Requires irrigation facilities	Labour intensive Women: sowing, transplanting, regular weeding, harvesting, threshing, drying, parboiling Men: ploughing and threshing
<i>Solam</i>	Year-round with irrigation, Without irrigation only during rainy season (sowing in July, harvesting 3 months later)	Marginal, small, and big farmers.	Not labour intensive. Women: sowing, weeding, harvesting Men: ploughing
Sugarcane	Growing and harvesting takes around 12 months Harvest starts early December One crop per year.	Big farmers with irrigation facilities	Not labour intensive. Harvesting teams from outside the village are hired on a contract basis. Men: ploughing, preparing drainage channels
Turmeric	Planting in May-June Harvest after 9 months	Small and big farmers, irrigation facilities preferred	Labour intensive Women: sowing, regular weeding, harvesting Men: ploughing, formation of furrows, spraying chemicals

Table 3.7. Main crops cultivated in Katuyanur with the cropping pattern and required labour. Sources: observations from the field and Tamil Nadu Agricultural University (no date).

The farmers in Katuyanur thus mainly cultivate crops for the market, which distinguishes them from traditional peasants. Peasants, according to Van der Ploeg (2013), are part of the capitalist system, but are distinct from capitalist farmers as peasant labour is not wage labour and peasant farm capital does not take the form of producing surplus to reinvest in the farm to create more surplus, but takes the form of farm assets and savings which do not necessarily produce further capital. Farmers in Katuyanur are not traditional peasant farmers who rely on family labour or reciprocal work parties to cultivate for subsistence and who are uninterested in increasing their economic position. This does not mean that labour is always paid with wages. The middle-aged woman living next to my host-family worked several days on a relative's paddy field outside the village in exchange for paddy instead of wages. Cultivation in Katuyanur is located within a capitalist market by relying on wage labourers, commercial crops, and the market, but they are not capitalist farmers either. For most farmers in Katuyanur, farming is a livelihood for meeting minimum needs, not about increasing and maximising capital (Layton, 1997). Capitalist farming does exist in the village; a few absent landowners hire local agricultural wage labourers through relatives who manage and oversee the agricultural work and the labourers. For these absent landowners, farming is one of their multiple sources of generating profit, not a source for subsistence income. These absent landowners are not farmers but businessmen. Most landowners in Katuyanur, however, are farmers who contribute their own labour for subsistence and thus resemble more to traditional peasants than to capitalist farmers. Farmers in Katuyanur cultivate commercial crops and operate in a capitalist market but have few other sources of income and failed harvests directly affect their subsistence. Katuyanur's farmers hope to make profits but are still small-scale farmers who cultivate to meet the minimum subsistence needs of their household.

3.6.2 Social Organisation in Katuyanur

Social organisation, particularly kinship, forms the backbone of village life. The first social unit through which people cooperate is the household, the second social unit is the social group based on kin, and the third social unit the village. All individuals in Katuyanur belonging to the Malayali community form a social group based on kinship. The households of the other caste-groups do not share kinship. Kinship relations used to be very local, but a trend already identified by Gough (1982) is continuing today, which is the gradual expansion of kinship relations over the region with increased movement of people and families, gradually breaking down boundaries between regional endogamous sub-castes in which marriage plays an important role. Indeed, in Katuyanur marriages regularly take place outside the *panchayat* and district, creating new connections between regional sub-castes.

Gender segregation, as described by Kabeer (1990) and Dube (1997), was seen in daily life in the village. Young children were playing outside before and after school and teenage boys were seen roaming around, play cricket or observe the group of young men gambling but teenage girls were

rarely seen visiting neighbours' homes. Doing homework was one of the few excuses teenage/college girls could use to visit nearby homes.

Descent is patrilineal for all castes; each child belongs to the father's kin-group. Some evidence suggests that the current patriarchal Malayali communities have matriarchal histories (Ehrenfels (1943) in Kumar-Range, 2001). While daughters move from her father's kin-group to her husband's kin-group, no one belongs to a mother's kin-group; there is no matrilineal descent. Sons marry and form a new segment of the patrilineage. Marriages are endogamous of sub-caste, or *jati*, but exogamous of lineage. While marriages between parallel cousins are prohibited, bilateral cross-cousin marriages are common. A girl's mother's younger brother belongs to a different lineage and thus marriage with him or his sons is possible, a girl's father's younger brother, however, belongs to the same lineage and thus marriage with him or his sons is not possible. In Malayali marriage customs, like elsewhere in Dravidian kinship, the maternal uncle, or his sons, is a girl's preferred marriage alliance (Kumar-Range, 2001).

Among the Malayalis in the Kolli Hills, the joint family is the ideal, but the majority of the households live in nuclear families (Rengalakshmi *et al.*, 2006). The composition of households in Katuyanur are similar to the picture in the Kolli Hills. The size of housing played a large role in the composition of the household, as small houses did not allow for large joint families. Sons therefore establish their own households in separate homes upon their marriage or soon after. Common timings of a joint family breakup are first, when multiple sons are married and establish independent households, second, when the father of married sons dies, and third, at a much later stage when one of the married brothers heads the household (Dube, 1997). In Katuyanur the first timing was most common among landless families, and all three timings were common among the farming families. While the landless families were motivated to separate due to lack of space, the motivation of farming families related to the preference to separate the farming business and consequently income. However, parents generally live with one of their adult sons or had a separate house near to the sons' home. Thus, while lineal joint families still exist, lateral joint families are rare.

In Katuyanur there are no property owning (corporate) groups, but within the ST hamlet there is one area registered as joint property; 15 houses are built on one property, registered as a *kootu patta* issued in 15 names, but these households do not consider the land as common or joint property. Identical to the Malayali community described by Rengalakshmi *et al.* (2006) in the Kolli Hills, women in Katuyanur, from any community, do not inherit land or other immovable assets, except daughters who do not have any brothers and widows can inherit their husband's land.

The landless ST villagers rarely resent current BC and MBC landowners who bought their ancestors' lands. Relationships between villagers from different castes are friendly; BC and MBC

landowners hire ST villagers as agricultural wage labourers and they attend each other's functions such as temple celebrations and marriages. The village president is always a Malayali but is equally respected by non-ST households who go to him for advice, help, or any issues that relate to local governance. However, they maintain their separate communities as inter-caste marriages are prohibited and though they pray to the same gods, they keep separate temples. Villagers belonging to SC communities are treated according to the practice of untouchability, but they are not ostracised. For example, after a *puja* at the temple in the ST hamlet, for which villagers had prepared and distributed *koozh*, it started raining. An SC man who does not live in Katuyanur but works in the village as an agricultural wage labourer, took shelter at Rani's home (all names in this dissertation are pseudonyms). He was not invited inside the house, nor offered a chair, but he sat on the cement floor of the driveway and neighbours gave him *koozh* on a throwaway plate brought out by Rani. Villagers seemed on friendly terms with him, as many knew him from working alongside him on the fields, and everyone passing by the house while he waited out the rain talked with him. Thus, while villagers from different communities interact on a friendly basis with each other in daily activities, they maintain practices to keep their communities distinct.

Kin-networks provide means for collective action and support. Social bonds among women in the ST hamlet are strong; women help each other out with cooking or childcare, borrow cooking utensils from each other, visit when someone is ill, cook food for each other's households when a woman is away for a few days, work and cook together for *puja* preparations, and call their friends for work in the field. Households help each other through small practices. For example, Rani's father came to Rani's house every morning to collect the rice water which he uses to feed his goats. Another man, an elderly local farmer, had left multiple old plastic *kodams* along the roads in the ST hamlet which villagers used to discard their rice water, vegetable and fruit peels, and other food waste. Every day he circled the village with his bicycle, from which two steel *kodams* suspended, to collect the food waste to feed his cows. This does not imply that everyone gets along all the time. Regular fights arise between neighbours and between household members. Sometimes fights between neighbours continue for a long time, during which entire households avoid each other.

Overall, the inhabitants of Katuyanur happily live in the village, saying it is a good and safe place. However, there are two big issues in Katuyanur that disrupt family stability. The first is alcoholism. Alcohol consumption is common among men, but among few this has led to alcoholism. Certain villagers are known to be alcoholics who waste entire salaries on alcohol and abuse family members. Alcohol is available from the government wine shop in the nearest town, but a villager is also selling alcohol from home. The second issue is gambling. Gambling is common among young men who spend substantial parts of their income, sometimes even all of it, on playing cards. Just outside

the ST hamlet, underneath a tree, groups of young men can be seen at any time of the day playing cards. These gamblers are not only from Katuyanur but also come from nearby villages and towns. Everyone in the village knows what they are doing but feel helpless in stopping it.

The village of Katuyanur is thus a mixed-caste, agricultural village where the majority of the farmers are marginal and small farmers, and where ST households are severely disadvantaged in terms of access to arable land. In this aspect Katuyanur is not much different from other agricultural villages in Tamil Nadu. Among all castes, women are especially disadvantaged in landownership and the majority of agricultural wage labourers are, like in Tamil Nadu in general, mostly (Malayali) women. The unsustainability of agricultural livelihoods resulted in many households diversifying their livelihoods, complementing agricultural work with non-agricultural employment outside the village. Against this backdrop, I spent the greater part of my fieldwork in Katuyanur, living with a landless Malayali family.

Chapter 4 - Doing Ethnography

The overall research method to achieve the research aim, goals, and objectives is an ethnographic approach. Ethnography is typically not a stand-alone research method but combines multiple qualitative and quantitative methods and data collection tools (Flick, 2008). Ethnography is a holistic research method carried out over longer periods. This ethnographic study includes the specific data collection tools of participant observation, in-depth semi-structured interviews, and a household survey. These tools allow for different levels of data comparison collected within and between research tools.

Over a period of 25 weeks, I conducted ethnography, split into three field visits between 14 June 2018 and 15 September 2019. The first two-and-a-half months I assisted the research team training 19 PhD students from Periyar University as research assistants and supported Kalpana and Manikandan who guided these research assistants in the field during the household survey and took part in data collection themselves. I also dedicated this time to conduct interviews to test my research topic-list, to interview central figures about the research area and familiarise myself with the study area, and to decide which village would be the most suitable research location to conduct ethnography. During this time, I stayed in the women's hostel on the campus of Periyar University and travelled back and forth between the research locations and Periyar University with the research assistants or with my interpreter. After these first months I made two additional field visits, 14 weeks in total, during which I collected ethnographic data while living with a family in the selected research location: the village Katuyanur. My first stay in Katuyanur started on the 15th of November 2018 and lasted six weeks. During this time, Deetshida accompanied me as my interpreter. I went to Katuyanur for a second stay on the 20th of July 2019 and stayed for an additional eight weeks, this time alone. The time in between field visits was used to identify gaps in collected data and to make adaptations and improvements to the research design, questions, and topics based on data and knowledge collected during rounds of fieldwork.

In this chapter, I discuss the steps taken leading up to data collection, the research tools used to collect data, the process of selecting the research location, how I gained access to the research location, and I introduce the households that are included in this study. The first section that follows focuses on doing ethnography and the specific research tools utilised in this research. The next section explains selecting the research location starting in the United Kingdom and refining the selection in the field. A description follows about my introduction into the research area and how I selected my informants. The main characteristics of the households included in this study will be presented in the next section, which is followed by an explanation on the process I undertook in collecting and analysing data. This is followed by a section with a reflection on my chosen methodology in which I discuss my own experiences of doing research, the influence of my social position on data collection and research findings, and the validity, reliability, generalisations, and limitations of the research. The final section discusses research ethics and managing research ethics in the field.

4.1 Ethnographic Research Method

Ethnography is the 'descriptive tradition in anthropology' (Layton, 1997, p.2-3), where data collection takes the form of notes and narratives. The reason for an ethnographic study instead of using quantitative data is that the focus of this research was not on cause and effect (Merriam and Tisdell, 2015) between access to land and food security, but rather on an understanding, *verstehen*, of these themes in a particular context, the links between them, and how people relate to and experience these themes and connections. Ethnography, and qualitative research in general, has the objective to describe and analyse processes of construction of social realities and patterns of social relationships (G. Miller, 1997). Ethnography thus suits a study on social relationships in processes of acquiring command over food and access to land. An anthropological study can illustrate how people or groups of people interact and negotiate with each other and the factors that empower or restrain them in these interactions and negotiations (Griffiths, 2017). Patterns in access to land and of food resources, preferences, and decisions result from social practices, therefore, studying and understanding these patterns requires more than identifying causal relationships.

Ethnography allows for deviating from a topic- or question-list to explore areas of interest not originally in the research plan, but that could turn out relevant. Especially for nuances of differences between types of access to land, arrangements of access could exist that are uncommon and therefore initially not thought of. Katz (1997) argued that qualitative research gives nuance and recognises complexity in relation to household management models, allowing for more meaningful policymaking. In terms of household food security, ethnography allows for an exploration and comparison between people's own perceptions on their household's food security, and my observations of that household and other households to make comparisons between different perceptions and between what people perceive and what I see. The development of a qualitative study relies on flexibility in data collection and analysis. Therefore, continuous reflection on my position within the study and on decisions I made throughout the study was crucial to explain the research progress. Keeping a journal helped me organise reflective thoughts and insights to keep track of this process of reflection. The strengths of doing ethnography are thus the flexibility of inquiry, the central role informants have in guiding the interview direction and relevant topics, and the use of multiple data collection tools to cross-reference collected data. A shortcoming of qualitative methods is that the research sample is relatively small, making it challenging to uncover how widespread patterns are. Another shortcoming is that the context is very specific, which means that generalising the research findings is restricted to geographical areas with a similar local context. The subjectivity of ethnographic data can be a weakness of the ethnographic approach, but through reflection on my own (socio-economic) position and my position as researcher I acknowledge this subjectivity and identify the impact it had on data collection and therefore research findings, which diminishes this weakness.

Society can be understood in two ways; from an *emic* (insider's) perspective and an *etic* (outsider's/observer's) perspective. To understand people's experiences and perceptions within a specific

location and population, it is necessary to spend time with them. Being a researcher and simultaneously trying to assimilate with the research population through participant observation provides the best opportunity to combine an *etic* with an *emic* perspective. My role as a researcher is therefore two-fold; a participant in the daily activities taking place in the research area, and an observer of these activities and its participants. Doing ethnography, it being a descriptive research method, allows to discover and understand behavioural patterns and roles among groups of people in their everyday lives and activities (Welman, Kruger and Mitchell, 2005), and reveal the regulations of people's interactions in everyday situations, when there is no ongoing conflict or bargaining (Griffiths, 2017). As a participant, the goal is to participate while trying not to change or intervene in the activities, although a decision on whether to intervene ultimately depended on the situation. My ability to participate in various activities and situations depended on the level of acceptance I received from the research population, in which my gender, age, class, and ethnicity played an important role (DeWalt and DeWalt, 2002). A language barrier also played a role in my acceptance and ability to participate, although often this was only a barrier perceived by the villagers as they assumed that I did not know anything of the Tamil language. However, I had spent 15 months in Tamil Nadu before the current study, spread over multiple visits since 2010, during which I had learned the Tamil language. Although I did not formally learn Tamil, I had always stayed with local families who did not speak any English. My everyday interactions with my host families therefore allowed me (and forced me) to learn Tamil well enough to maintain conversations in Tamil. However, this is not to say that my Tamil is fluent. I struggle to follow conversations between people and groups of people, and it takes longer for me to make myself clear in Tamil or to understand someone in Tamil compared to conversations in English or my native Dutch.



My stay in Katuyanur and my research activities quickly shaped into a daily routine. Rani and her family hosted Deetshida and me for the duration of my fieldwork in Katuyanur. I shared a room with Deetshida and Sona, Rani's eldest daughter, and we slept on mats on the floor. Rani always got up first, sometimes as early as 4.30am, to heat water for showering and to prepare breakfast. I usually woke up around 7am and Rani would bring coffee soon after. Deetshida and Sona slept for another hour, and at 9am the three of us had breakfast. Rani never joined us for breakfast; she would sit in front of us to serve our food and would only have breakfast herself around 11am. After breakfast, Deetshida and I got ready to walk around the village to find an informant for an interview. We would be back at Rani's home before lunch. After lunch Deetshida often took some rest while I stayed and chat with Sona and Rani in front of the house or inside while watching television. In the evening Deetshida and I went out again, sometimes for an interview, sometimes to visit informants for a conversation. We would get back around 7pm, at which time Rani had already prepared dinner. Before going to sleep around 10pm, Rani made coffee for everyone, while she herself would not go to sleep for another hour. When I came back to Katuyanur for my second

stay, the situation had somewhat changed. I had come alone this time and Sona was now married and had moved to her husband's home in a different village.

Deetshida and I felt somewhat uncomfortable during our first days living with our host-family. We did not want to impose on the space of our host-family, so we stayed in our room whenever we were at the house. Rani's family and other villagers, however, made us soon feel welcome. On our first night in Katuyanur, neighbours came to see us, chat, and invited us to their homes, as they had heard of our arrival. On the first morning a group of women invited us to join them to the forest, as described in Chapter 1, and on the third day one of these women came by again to take us around on the other side of the village. As I became increasingly familiar with the villagers, a few informants regularly dropped by Rani's house in the evening for a chat or came over to invite me for dinner. The first week Rani did not speak to me much; she only called me to eat and even then, she addressed me through her daughters or through Deetshida. However, these meals provided excellent opportunities to build rapport with her. During the meals I started asking Rani simple questions and from that moment onwards our interaction improved, and Rani came to sit with Deetshida and me now and then just to chat. Later, I helped Rani with cooking, mainly cutting and cleaning vegetables, whenever I was at the house or would keep her company in the kitchen while she was preparing meals. We chatted during this time, sometimes about subjects related to my research, at other times just to pass time, or so I could learn to prepare various dishes. When I did not have any specific research activity planned, I sat with Rani in front of the house. Besides these rapport building activities and conversations, I made use of various data collection tools. Most of the data presented in this dissertation results from participant observation and semi-structured in-depth interviews.

Participant Observation

Participant observation is "inductive and has the potential for uncovering unexpected links between different domains of social life" (Association of Social Anthropologists of the UK and the Commonwealth, 2011, p.1). The purpose of participant observation is to observe and take part in daily activities, in public and in private settings, to experience these activities as an insider: from *emic* perspective. With participant observation, the researcher is the research instrument; the researcher experiences what the research population experiences to understand their everyday lives from their perspective, the meanings they give to experiences and to life-worlds, and to understand their behaviour (Welman, Kruger and Mitchell, 2005). Being a researcher who is participating as well as observing, requires maintaining a balance between participation and awareness of what is happening, asking questions, and making notes. I recorded observations and experiences in fieldnotes and a personal diary.

In the field, it is difficult to sift information and data between what is relevant and what is interesting but not immediately relevant. My fieldnotes contain more information than only that related to the topics of study. Partly because my notes reflected memories about the village and the villagers I did not want to lose, and partly because I did not want to risk not writing things down that might turn out relevant later. At the same time, it is impossible for my writing to fully encapsulate my impressions of the

village, nor the complexity of social life in the village. I limited my focus on aspects relevant for my study and thus present only a limited picture of social life in this dissertation.

Through participant observation, I gained insight into everyday life within the village, particularly in the ST hamlet, through listening, observing, asking questions, participating, and experiencing. I engaged in participant observation from the moment I got up from bed until the moment I went to sleep, although I could not participate in all activities. For example, when I visited informants' homes, they treated me as a guest; I could therefore only observe the work they did at home. Activities ranged from the mundane tasks like doing the laundry, cooking, and sweeping the house to special activities such as temple festivals, health-camps, and meetings. One such meeting was about planting trees and caring for trees for a healthy environment. The Forest Department had organised this meeting, for which they had invited a troupe to perform a street play on the primary school ground, and was attended by schoolchildren, teachers, and other villagers, mostly women, who had not gone to work. Other special activities I engaged in were two *pujas* to ask the gods for good rains, a health-camp organised by a private health centre, and a temple festival for a group of villagers about to travel to a temple near Chennai. I built rapport with villagers by responding to invitations and by accompanying women into the forest.

One regular activity I could not participate in was collecting firewood in the forest. I wanted to join the women on their weekly trips, but they did not want me to join them for such unpleasant work. They thought I could not keep up, and they did not want to expose me to the heat, the *unnis*, the long hours, and the lengthy walk. After some women invited me to join them along with many other villagers to a forest temple, I had to insist I could walk with the women to the temple instead of joining the children, elderly, and teenagers in a small lorry. Participating in daily activities and conversations I managed on my own; I did not need interpretation from Deetshida for these research activities, and thus she did not always join, although she was present and needed for every interview. During the second round of ethnographic data collection, I did not have an interpreter, so I had to depend entirely on my Tamil language knowledge. My host-family proved an excellent gateway into the local community as many villagers frequented their shop. Just hanging around the house and the shop gained me visibility in the village and made me known among villagers. This made it easy for Deetshida and me to approach potential informants and it gave us confidence walking around the village as we soon knew many people.

Villagers were surprised I spoke Tamil, which helped build rapport as informants recognised my interest in them, their daily lives, and their culture. They appreciated my adjustability (such as joining them on their activities and liking their food) which also helped to build rapport. The longer I stayed, the more open people became with me, especially those with whom I had frequent contact. They revealed information that they had kept to themselves before. For example, one informant at first told me her 18-year-old daughter-in-law had married 10 months earlier, but towards the end of my second stay, she revealed her daughter-in-law had already married at the young age of 13. Building rapport during my stay

thus resulted in increased trust and informants opening up, which was noticeable in the kinds of information they became willing to share with me.

A few informants I visited regularly, especially during my second round of ethnographic fieldwork when I stayed with Rani's family alone. These informants frequently asked me to come and visit, although sometimes I visited unannounced. Gayatri, Rani, and Jaya quickly became key-informants to whom I could ask anything and cross-check my observations. I met Jaya on the first night in Katuyanur when she and her husband came by to meet Deetshida and me and on numerous following occasions she showed me around the village and took me to see the forest. Gayatri was one of the women whom I joined on my first day into the forest, after which she visited Rani's home regularly to sit and chat with me. Gayatri and Jaya called me many times to visit their homes for dinner, tea, or snacks. These occasions provided an excellent informal setting to converse about life in the village, to discuss topics relevant for my research, and to build rapport.

In-depth Semi-structured Interviews

In total I collected 40 interviews: 33 interviews with villagers and 7 interviews with administrative figures. The first 13 interviews with villagers I conducted in villages not far from Katuyanur, helping to familiarise myself with the study area and rural life and to test my research topic-list. After conducting these interviews, I decided which village would be the research location and the remaining 20 interviews took place in Katuyanur and are the focus of the study presented in this dissertation. The seven interviews with administrative figures covered village-wide issues related to land and food. Three of these interviews were with informants whose professional responsibilities encompassed Katuyanur; the local VAO, the Panchayat Secretary, and the former village president/current FRC secretary. Each of the interviews lasted between 76 minutes and 3 hours and 35 minutes. Interviews were usually completed in one day. Only three interviews required multiple visits because it got late, or because the informant had work to do. All interviews were audio-recorded. This was not always without issues as on two separate occasions the battery of my audio-recorder ran out during an interview. The first time this happened I lost 30 minutes of audio of the interview. However, I always kept notes during the interview, so my notes filled in much of the data in this 30-minute audio-gap. The second time this happened I noticed it immediately and did not lose any data. I always conducted the interviews at the informants' homes, although often we sat in front of the home rather than inside.

During the interviews I depended on my interpreter, as my knowledge of the Tamil language was inefficient in an interview setting. Interviewing with an interpreter could be challenging. The main challenge involved the exhaustiveness of interpretation to cover everything that informants said. Asking relevant follow-up questions during interviews with an interpreter is more difficult compared to interviewing on your own, but as my time in the village progressed, I could increasingly follow the conversation, making it easier for me to jump in with follow-up questions. Listening back to the audio for transcribing, I could better follow what informants said in Tamil, which made me realise I missed information at the time of the interview and therefore missed several opportunities to ask follow-up

questions. Missed opportunities for follow-up questions were not always the result of interpretation, but also a reflection on my own listening skills as sometimes I did not ask a follow-up question which, in retrospect, I should have asked.

For each interview I had a topic-list to give structure to the interviews and to verify that I did not forget any important topics. I did not have strict interview questions or an interview schedule, nor did I limit the topics discussed during interviews to those on my topic-list. The interviews were thus semi-structured, which allowed for flexibility in topics, depending on what informants told me that I thought relevant or interesting. The topic-list thus supported the structure of the interviews and the consistency of topics addressed throughout the interviews, while retaining flexibility for improvisation, i.e., allowing to ask about topics not on this list. This flexibility made the interviews resemble open dialogues with conversational reciprocity between interviewer and informant. The topic-list was based on my literature review and research questions. This topic-list was not fixed; during my fieldwork I continuously added and removed topics as the result from quick analysis and reflection based on completed interviews.

The only questions that I consistently asked in the same order were nine questions relating to villagers' perceptions of their household's vulnerability for food insecurity and their behavioural responses to vulnerability to insufficient access to food. These nine questions were taken from the Household Food Insecurity Access Scale (HFIAS) developed by USAID's Food and Nutrition Technical Assistance Project (FANTA) and its partners (Coates, Swindale and Bilinsky, 2007) and are reproduced in appendix II. These nine questions form the base of a point system which groups households into four categories of vulnerability to access to food: severely food insecure, moderately food insecure, mildly food insecure, and food secure. As the number of households interviewed in this study was too small for any statistical analysis, I used these questions to understand the issues villagers face in terms of food (in)security and how they deal with food insecurity, including their perceptions and behavioural responses. These questions relate to three important domains of food access; anxiety about a stable food supply, insufficient quality of food which includes variety and preferences, and insufficient food intake. While the original HFIAS questions are closed-ended, and if relevant followed by a frequency question, the comments informants offered in answer to these questions were much more interesting. The household survey initially included the same nine questions, which would have resulted in easy comparison of the food security data from the interviews with the data from the household survey. However, during the reviewing and adjusting of the questionnaire for the household survey with the UKIERI-project team, the questions related to food preferences morphed out of the final questionnaire. I nevertheless use some results on food insecurity from the household survey to substantiate my findings from the interviews and participant observation.

I had planned to conduct two interviews a day so that I could complete 30 to 40 interviews during the month Deetshida was with me to interpret. The daily rhythm of life in the village, however, made this difficult and often we conducted only one interview a day. Villagers were busy with work in the mornings and evenings, so the best moments to find an informant with some spare time were in the morning after

11am and in the afternoon after 3pm. Informants often offered us snacks and tea or coffee, and if we had arrived around lunch or dinner time, they insisted we stayed for a meal. We did not want to burden people with serving us lunch or dinner, so we took care to arrive after breakfast and well before lunch, or after lunch and well before dinner. This resulted in a lower number of total interviews than planned beforehand.

After completing the fieldwork, I had two types of data: audio-recordings and fieldnotes. Back in London I transcribed the audio-recordings, not only the English interpretations but also the Tamil answers the informants gave because of the information lost in the interpretation. Listening back to the audio and the Tamil conversations thus often provided me with more information than I had received in the field. I transcribed without 'cleaning up' sentences and grammar, adding observations such as laughter, silences, 'uhm', 'hmm', and raised or hushed voices to allow interpretations from how informants said things. Transcribing all 40 interviews took many weeks. Transcribing is always time consuming, but the interview settings often made it difficult to hear the conversations due to background noise (vehicles, wind, cattle sounds, crying children), multiple people talking on top of each other, or both. This frequently required listening to certain audio-sequences multiple times. On average, I could transcribe one interview per day (approximately seven hours work), but if there were many disturbances in the audio it sometimes took me twice that long. I had transcribed interviews in the field in the evenings, but after 14 weeks I had completed only eight transcripts. The remaining transcripts I completed in the seven weeks after returning to the UK.

Household Survey

The team of the UKIERI research project, consisting of Professor Hulya Dagdeviren, Professor A. Elangovan, Dr. Chamu Kuppuswamy, Dr. R. Parimalavalli, M. Manikadan, P. Kalpana, and myself, conducted a survey among rural households from various agricultural villages in Salem District. Survey data collection took place between July 2018 and November 2018 among 981 rural households from three different blocks, covering 33 villages. My involvement with the survey was limited to the first two months of my fieldwork, during which time I assisted the research team, under guidance of Professor Hulya Dagdeviren, with developing the questionnaire for the household survey, selecting the blocks and Village Panchayats where the survey would take place, collecting the survey data, and managing the data entries. Professor A. Elangovan and Dr. R. Parimalavalli arranged all required facilities for data collection, while I assisted M. Manikadan and P. Kalpana with supervising the research assistants during the first two months of survey data collection, during which time 414 questionnaires were collected. In this dissertation I only use the data collected from 103 households in the village of Katuyanur on 10 and 11 July 2018. Whenever I refer to this survey data I do so explicitly and only to substantiate my ethnographic findings as the sample size of the household survey is larger compared to the sample size from my ethnographic study.

Katuyanur was the second village visited for the household survey. In the first village the UKIERI team members, including myself, accompanied the research assistants while they collected data to provide direct feedback. In Katuyanur the research assistants went out in pairs to visit households to conduct the survey without a UKIERI team member to observe them. The research assistants were sent in different

directions to approach households with and without access to arable land. As neither the research assistants nor the other UKIERI team members knew the characteristics of the individual households in the village, the research assistants randomly approached houses and started the questionnaire wherever someone was at home. The research assistants could complete two or three questionnaires in one day. The days of data collection were long and required travel of up to three hours. The initial plan was that the research assistants would complete data entry at the university immediately after returning from the field, but the late return to university meant this was not feasible so instead we took days off in between data collection to give the research assistants time for data entry.

During days on which we did not collect data, I checked the submitted data entries for inconsistencies, missing data, and mistakes. The research assistants then made the required corrections to finalise the data entries. A few issues arose compromising the quality of data; the research assistants struggled with a language barrier since the questionnaire and training were in English, working with students from a different university with different ethics procedures required extra attention to compliance to research ethics, and occasional inconsistency from the research assistants in completing all survey questions. I also faced problems with research assistants not taking me seriously when giving instructions regarding data collection or data entries as we were all PhD students.

4.2 Selecting the Research Location

Collaborating on this research project with Periyar University in Salem, South India, required the fieldwork to take place in Salem District. Selecting the specific research locations for the household survey started in the UK based on the 2011 population census. The UKIERI research team discussed and decided on the criteria that should apply to the research area, and for which the census provided data. These criteria included that the area should be classified rural, represent multiple caste groups, be primarily agricultural with substantial presence of cultivators and of agricultural wage labourers, and should include a variety of land types such as arable land, forest, and pastures. First, I selected two blocks where the demography was most optimal based on the mentioned criteria. Then I selected two Panchayat Villages within each of the two selected blocks based on the same criteria plus two additional criteria; the research area should have a population between 400 and 2000 and average land size between 0.5 and 3 acres to have a majority of marginal and small farmers. At this point I was unaware that a Village Panchayat is an administrative unit containing multiple villages or hamlets, and that the number of hamlets grouped together depends on the total population size. This caused a confusing interview with the Panchayat Secretary of one of the selected Panchayat Villages who referred to different villages I thought were not part of my research area. It was not until later in the interview that I became aware I was intermingling the Panchayat Village and the different hamlets within the Panchayat Village, while the Panchayat Secretary was attempting to give me precise data based on the different hamlets within her Panchayat Village. Each hamlet had in fact distinct characteristics, such as in communities represented, households' access to arable land, and livelihoods. This meant I had to re-think which hamlets should be part of the research area. The strategy I undertook

from the moment I realised my mistake was to consult the VAO of the area and the Panchayat Secretary, to find out the most suitable hamlets based on the same criteria as for the initial selection, only now I did not base the selection on census data, but on the knowledge of the local experts. At both stages of selecting the villages for data collection, I discussed the options with my supervisors, who gave approval to finalise the selected hamlets as research locations.

Before visiting any of the hamlets, the UKIERI team, including myself, met with the *Tahsildar* of the respective blocks, and the VAOs and Panchayat Secretaries of the selected Panchayat Villages. The purpose of these visits was two-fold; to gain permission from a government official to conduct the research in those areas and to get an introduction into the hamlets and the research population. The local VAOs took us to different hamlets to introduce us to a village leader, after which we could start the household survey. These first two months of fieldwork for the household survey allowed me to visit three of the pre-selected Panchayat Villages, and nine different hamlets. During these visits I interviewed village leaders, walked around the hamlets, and talked with villagers. My experiences, impressions, and conversations in these different hamlets directed my decision on where to conduct the ethnographic study. Katuyanur was the first village to which the local VAO had introduced the UKIERI research team. We had followed the VAO to Katuyanur and when we arrived, we parked the car near a temple on the edge of the hamlet. It was a warm and sunny day and while walking to the house of a villager well-known to the VAO we saw only few people. Arriving at the house, we were introduced to the villager who guided us through small streets and over compound lands to the village primary school. We went into a classroom that soon filled with villagers, despite it being a Wednesday morning. We introduced ourselves to the villagers and asked questions about their lives and their hamlet. During this first visit I did not think Katuyanur would be suitable for my ethnography as everyone in the village belonged to one ST community and few households owned arable land.

Katuyanur was a suitable hamlet to include in the household survey, so two weeks later I visited Katuyanur for a second time. It was during this second visit I learned there was variety in community among the households and the ST hamlet we had visited before, where most households had no access to arable land, was surrounded by landowning households belonging to various communities. Katuyanur turned out diverse in caste and landownership after all, with most households making a livelihood from agriculture. A centrally located hamlet benefitted participant observation as the proximity of the houses made interacting with people from various households easier compared to areas where houses are remote from each other. During the two days of survey data collection, the villagers made a friendly and welcoming impression, and seemed open to speak with me. The relevant demographic diversity of Katuyanur and my first impression of accessibility to the research population were the decisive factors to choose Katuyanur as the location for my ethnography.

Two-and-a-half months after my first field visit, I returned to Salem to start my ethnographic study. The local VAO and Professor A. Elangovan helped me find a family in Katuyanur willing to host me. Heavy

rains and a threatening cyclone prevented me from visiting the village to meet the potential host-family immediately after my arrival at Periyar University. After two days a student from Periyar University was willing to drive me to the village so I could meet the family and finalise the arrangement for me and an interpreter to stay with them. The following day I met Deetshida, an English graduate student who had studied in Goa and who I was introduced to through the network of Dr. Chamu Kuppaswamy, and two days later Deetshida and I were on our way to Katuyanur. Finding a place to stay and making arrangements with an interpreter only took me five days, and on the sixth day after arriving in Salem I started my ethnographic research.

4.3 Gaining Access and Sample Selection

Gaining access to the research population was largely facilitated through my host-family, who acted as gatekeeper. Rarely did we find potential informants unwilling to take part in an interview. Our presence in the village and reasons for being there were quickly known throughout the village. Occasionally, if a potential informant had not heard about us and was hesitant to talk with us, we would mention in whose home we were staying and that would always remove informants' hesitations as the trustworthiness of our host-family would translate onto us. This host-family was a ST family without access to arable land, consisting of six household members. The father, Sethu, was the former villager president and current FRC secretary, and the mother, Rani, a shopkeeper and agricultural wage labourer. Rani and Sethu were both born in Katuyanur and most of their neighbours are their relatives. Sethu's parents had moved to a different village a few years before while Rani's parents lived one street away. They have four adult children, two sons and two daughters. The eldest, a son, has been working in Kerala since he dropped out of school in year 10 and comes home once every month or two for several days. Their second child, also a son, was still in college, which he combined with state level athletics competitions. The third child, Sona, completed her undergraduate degree in engineering while the youngest daughter was in college to become an electrician. During my first stay in the village, Sona was always at home and helping with the shop, but when I returned to Katuyanur seven months later, she had married and left the house. Sethu was engaged in unpaid social work and made sure the shop was well-stocked. Their house was one of the bigger buildings in the ST hamlet comprising three rooms, one kitchen, two bathrooms, a shop, and a big roof terrace. The compound in front of the rooms was a concrete driveway shaded by roofing sheets. Their shop was the only one in the village and frequented by many villagers from the ST hamlet and the surrounding area.

During the first couple of weeks, selection of informants for the interviews was random by walking around the village looking for houses where people were at home and had time for an interview. I only interviewed informants who were married, separated, or widowed as an important focus was on gender relations and decision-making within the households, a situation that would be different for unmarried adult children living at home. We tried planning interviews in the early stages of fieldwork, but this turned out inefficient; after arriving on the agreed upon day and time, informants were often not at home or were busy with work. This meant coming back another day, sometimes a few days in a row, until the informant

had time to spare for an interview. Therefore, instead of planning interviews on specific times with informants beforehand, we made a casual arrangement and showed up unannounced. Before Deetshida and I set off in search of informants, I had an idea whether I wanted to interview farming households or households without access to arable land, which meant either staying in the ST hamlet or going out into the agricultural fields. This idea was based on the characteristics of the households interviewed so far. Since we could not tell merely from the look of a house to which community the people living there would belong, I did not approach finding new informants based on caste. Although the key variables I intended to study included type of access to arable land, caste, landowner, and size of land, I did not have any information about the individual households to select my informants in a stratified manner. The local VAO only had data on landownership and land type, not type of access, and no data on the gender of landowners.

I intended to include a variation of informants based on caste, type of access to land, size of arable land, women's landownership, and gender aimed at a holistic understanding of the issues and relations within the village and comparing villagers and households based on those characteristics. This would increase the potential to generalise the research findings to other villages, communities, and localities (Larsson, 2013). To accomplish this variety in informants, every couple of days I reviewed the characteristics of the informants interviewed so far, and I switched to snowball sampling. I asked my host-family, particularly Sethu, for directions to households with specific characteristics. As the former village president, he knew all the villagers and could provide the best advice on who to approach. In addition, living in the house with the village's only shop offered another opportunity to meet potential informants. Whenever I met a villager I had not seen before, I asked this person questions to establish where I could position this villager's household in terms of caste, type of access to land, and presence of women's landownership. I used this information to approach informants to cover all the aforementioned characteristics. Sometimes these potential informants knew why we were staying in the village and instead of me needing to ask them for an interview, they asked us to come visit them for an interview.

Both methods of sample selection by design excluded absent landowners. These absent landowners do not live in Katuyanur, some never have, but manage cultivation from a distance, sending family members to oversee the agricultural wage labourers. Such absent landowners are arguably not farmers but people in the agri-business. Since agricultural wage labourers from Katuyanur work on these fields, these landowners' absence is not a sufficient reason for exclusion from the research, but for practical reasons I did not travel outside the village to meet with such landowners. Despite snowball sampling, SC households are not represented in the interviews, even though there are SC households in the village.

Building rapport was easiest with women between the ages of 30 and 50 for three reasons. First, these women were more often at home compared to other household members. Second, my age and gender made it easier to connect with them. Third, in terms of language it was easier to talk with women compared to with men. Women seemed better able to adjust their speech so I would understand them

and were quicker to understand my imperfect Tamil. I do not know the reason for this difference, but it may relate to differences in frequency of interaction rather than gender per se. Most of my data thus comes from women between 30 and 50 years old rather than from men, from the elderly, or from younger generations still in college. Since I stayed in the ST hamlet, participant observation was more elaborate among the landless ST villagers. This implies that the data presented on landless ST households is more in-depth compared to data on landowning (ST and non-ST) households.

The households included in this study are not stable entities. While changes occurred throughout my stays, they were clearer when comparing my first and my second field visit. In between my two visits, girls had gotten married and moved away, Sona being one of them, pregnant women had given birth, thus increasing the number of household members, while other pregnant woman had gone to their parents' village to give birth there. Not only household compositions had changed; two households I had interviewed during my first stay had moved away from the village when I returned seven months later. Other informants changed their jobs, among them a group of Malayali women who had been working as agricultural wage labourers and had now ventured outside the village to work in an incense factory. My first visit took place in the months before harvest, with fields full of high rising sugarcane, tapioca, and banana trees. During my second visit many fields were empty as it was the period just before planting, a period with little work for agricultural wage labourers. During my first stay, I regularly saw Sarada and her daughter-in-law move their calves between stretches of fallow land and their house. During my second stay they had found a place outside the ST hamlet where they could keep the cows during the day and night, so I no longer saw them bringing the cows back and forth between their home and the fields. This cleared time for Sarada and her daughter-in-law, resulting in Sarada working as agricultural wage labour and her daughter-in-law joining the group of ST women to work in the factory. Gayatri, one of my key-informants, had lost access to her mother-in-law's arable land, her daughter-in-law had been staying in her native village for four months to give birth to a daughter, and Gayatri herself exchanged working as an agricultural wage labourer for working in the incense factory.

4.4 The Households

The informants from Katuyanur who took part in the household survey belonged to 103 households, which represents 57% of the total households in Katuyanur. Survey data was collected from 8 BC households, 27 MBC households, 5 SC households, and 63 ST households; there were no mixed caste households. Compared with the village population, the survey represents 50% of the BC households, 44% of the MBC households, 42% of the SC households, and 71% of the ST households. The survey data thus underrepresents MBC and SC households and overrepresents ST households. The youngest household member was 6 months old and the eldest 95 years old. The informants included 54 women and 49 men, aged between 20 and 75 years old. Table 4.1 shows that most of the informants were married, and nearly all widowed informants were women. Informants' average educational level was 5.0 years, with men having enjoyed more years of education (5.7 years) compared to and women (4.3 years). Not all informants

had received education; 41 informants were illiterate (1 BC, 7 MBC, 3 SC, 30 ST) (for all castes more women than men). Only eight informants had a college degree (1 BC, 3 MBC, 1 SC, 3 ST) (for all castes more men than women). Informants from SC households had fewest years of education (1.25 years), followed by informants from ST (3.5 years), MBC (5.6 years), and BC households (8.6 years).

	Number	BC	MBC	SC	ST	Marital status
Women	54	6	13	2	33	42 married, 1 unmarried, 1 separated, 10 widowed
Men	49	2	14	3	30	45 married, 3 unmarried, 1 widowed
Total	103	8	27	5	63	87 married, 4 unmarried, 1 separated, 11 widowed

Table 4.1. Informants' marital status and community by gender.

Among the 103 households, 64 owned arable land, for 45 of whom farming was the main livelihood, and the remaining 38 households did not own arable land and depended on agricultural wage labour as main livelihood (see Table 4.2). All landless households belonged to the ST community, except one, while landownership was present among all communities in the village. This conflicts with the data the village president provided, which is that only ST households are landless. Not all agricultural wage labourers were landless; 19 households combined agricultural wage labour with farming, and one ST household owned land but had pastoralism as main livelihood.

	Total	Farming				Agricultural wage labour			
		BC	MBC	SC	ST	BC	MB	SC	ST
Landowning	64	6	21	4	14	2	6	0	11
Landless	38	0	0	0	0	0	0	1	37
Total	102	45				57			

Table 4.2. Main livelihood of landowning and landless households by community.

Table 4.3 shows that most households obtained land through inheritance, and just over half of the landholdings were marginal landholdings. BC households owned the largest landholdings with an average of 5 acres, followed by MBC households with 3.4 acres, SC with 3.25 acres, and ST households owned the smallest holdings with an average of 3.15 acres. Among 51 households with data on the landowner, only 7 landholdings are owned by women (3 ST, 4 MBC), 4 landholdings are under joint ownership between spouses (2 ST, 2 MBC), and the remaining 40 landholdings are owned by men. The landholdings owned by women and owned jointly were on average 1 acre smaller compared to landholdings owned by men.

	Land obtained through			Land size class			Owner		
	Purchase	Inheritance	Government	Marginal	Small	Big	Male	Female	Joint
BC	2	3	0	1	3	3	7	4	0
MBC	5	15	2	14	5	3	16	0	2
SC	0	2	0	1	1	1	2	0	0
ST	4	14	2	13	9	3	15	3	2
Subtotal	11	34	4	29	18	10	40	7	4
Total	49			57			51		

Table 4.3. Source of landownership, class of land size, and landowner by community.

Most of the data presented in this dissertation, however, originates from 34 informants who took part in the in-depth semi-structured interviews, although some overlap between informants of the survey and of the interviews may exist. For 12 out of the 20 interviews in Katuyanur, multiple household members were at home and participating in the interview, usually spouses (in 7 interviews). Only one interview included two informants from different, but neighbouring, households. This resulted in 34 informants from 20 interviews. Among the informants there were more women (22) compared to men (12). All men were married, while among the women one was unmarried, one separated, three widowed, and the others married. The youngest informant was a 22-year-old woman and the oldest informant a 65-year-old man. The women's average age was 42, and the men's age 54. Average education level was 5 years for women and 6.3 years for men. Among the women, one belonged to the BC community, six to the MBC community, and 15 to the ST community. Among the men, two belonged to the BC community, two to the MBC community, and eight to the ST community. There were thus no informants from the SC community.

As some informants belonged to the same household, the 34 informants represented 20 households: 14 ST households, four MBC households, and two BC households. Table 4.4 shows a summary of the main characteristics of these 20 households; eight of the ST households had no access to arable land, six ST households had access to arable land but only three with ownership, four MBC households had access to land of whom three with ownership, and two BC households had access to land among whom one with ownership. Among the 20 households, 12 had access to arable land for which there were 15 landowners in total: 4 women (2 ST, 2 MBC) and 11 men (4 ST, 5 MBC, 2 BC). However, among the 34 informants seven ST women owned housing land compared to two ST men. Landowning households have their house built on their arable land and therefore do not have a housing *patta*.

Household	Total	Access to arable land	Landownership	Women landowners	Men landowners
BC	2	2	1	0	2
MBC	4	4	3	2	5
ST	14	6	3	2	4
All	20	12	7	4	11

Table 4.4. Main characteristics of the 20 interviewed households.

Compared to the population of the block to which Katuyanur belongs, ST households are over-represented in this study (as ST households form only 4% of the block's entire population), while SC households are under-represented (they form 20% of the block's population). ST communities are a minority population in Tamil Nadu, and live concentrated in specific villages, of which Katuyanur is one. Katuyanur's population is therefore not representative of other villages in Tamil Nadu, but only of those villages with a high ST population.

A detailed introduction to informants who are frequently mentioned throughout this dissertation can be found in appendix I, while Table 4.5 provides an overview of all the 20 households interviewed in this study in relation to their sources of income and their access to arable land. The numbers of the households in Table 4.5 correspond with the numbers in Map 3.3 in the previous chapter, although the numbers 11 to 20 are left out of this map as all these households are in the ST hamlet.

Table 4.5. Details of 20 interviewed households.

House hold	Caste	Marital Status	Household Main Income	Other incomes	Farmer/ landless	Total land size (acres/category)	Size patta land (acres)	Land patta M/F/J	Patta within household?	Irrigation facilities
1	BC	Married	Farming	Driving, livestock (milk and goats)	Farmer	4/small	4	M	Yes	Open-well and bore-well
2	BC	Married	Farming	Rent from Hatsun shop, livestock (milk)	Farmer	6/big	6	M	No: unofficial division	Bore-well and drip
3	MBC	Widowed	Livestock (selling milk)	Farming, salary from son (power loom) and son-in-law (lorry), agricultural wage labour	Farmer	1.5/marginal	1.5	M	Yes	Bore-well (no motor)
4	MBC	Married	Farming	Livestock (milk), railroads wage labour	Farmer	1/marginal	1	M	No: unofficial division	Open-well (dry)
5	MBC	Married	Farming	Livestock (milk and goats)	Farmer	7/big	7	M/M/F	Yes	Bore-well
6	MBC	Married	Non-agricultural (driving)	Farming, livestock (milk), agricultural wage labour	Farmer	1/marginal	1	M/F	No: unofficial division	Bore-well and drip (dry)
7	ST	Widowed	Farming	Rent from house, livestock (milk), tailoring	Farmer	2.5/small	2.5	M	Yes	Open-well (dry)
8	ST	Married	Farming	Salary from husband (JCB operator), livestock (milk), agricultural wage labour	Farmer	2/marginal	2	M	Yes	Bore-well (dry)
9	ST	Married	Agricultural wage labour	Farming	Farmer	1.75/marginal	1.5	F	No: unofficial division	Bore-well (almost dry)
10	ST	Married	Agricultural wage labour	Farming	Farmer	3/small	3	M	Yes	Open-well (dry)
11	ST	Married	Agricultural wage labour	-	Farmer	0.5/marginal	0.5	M	No: unofficial division	None
12	ST	Separated	Non-agriculture (driving)	Agricultural wage labour, farming, incense factory	Farmer	2/marginal	-	F	No	None
13	ST	Married	Remittance from son in Kerala (JCB)	Non-agricultural (shop), agricultural wage labour, forest wage labour	Landless	-	-	-	-	-
14	ST	Married	Agricultural Wage Labour	Livestock (milk), salary from son (lorry driver), incense factory, school pension	Landless	-	-	-	-	-
15	ST	Married	Non-agricultural (PDS shop)	Ox (raising and selling), agricultural wage labour, forest wage labour	Landless	-	-	-	-	-
16	ST	Married	Non-agriculture (driving)	Agricultural wage labour, tailoring	Landless	-	-	-	-	-
17	ST	Married	Non-agriculture (construction)	Agricultural wage labour	Landless	-	-	-	-	-
18	ST	Married	Agricultural wage labour & construction	Livestock (goats)	Landless	-	-	-	-	-
19	ST	Widowed	Non-agricultural (driving)	Teaching (Anganwadi), agricultural wage labour, 100-days-work, forest wage labour	Landless	-	-	-	-	-
20	ST	Married	Agricultural wage labour	Textile company (son), compressor company (son), livestock (milk)	Landless	-	-	-	-	-

4.5 Data Collection and Data Analysis

The strategies and processes of data collection and data analysis ran simultaneous throughout most of the research but started with data collection using the household survey in July 2018. While data collected through the household survey in Katuyanur was completed before the start of my ethnographic fieldwork, the data was not fully entered until after I started my ethnographic fieldwork. Therefore, I used the results from the household survey in Katuyanur to triangulate my ethnographic findings as the sample size of the household survey is larger than the sample size from my ethnographic study. I also used the results from the household survey to compare against the demographics of the households I interviewed as there is no census data available on village level (only on the level of the Panchayat village). Before starting my ethnographic fieldwork, I interviewed the VAO and Panchayat Secretary responsible for the Panchayat Village that includes Katuyanur to receive all the background information about Katuyanur that I needed to form a complete picture of the demographics, land use patterns, main livelihoods, and main issues villagers have to deal with.

As described at the beginning of this chapter, the ethnographic data collection took place during two separate periods: the first during November 2018 and December 2018 and the second between July 2018 and September 2019. In the first period, data collection focussed on interviewing, as Deetshida was staying in the village with me to interpret the interviews during this time, and participant observation. I usually started these interviews with questions around their household composition, income sources, land access, landownership, and landed property inheritance. The purpose of starting with these questions was to get a clear picture of the household characteristics before starting the in-depth interview questions as I had separate topics for farming households and for landless households and for households where women owned land and where men owned all the land. I maintained an Excel sheet with the basic characteristics of the interviewed households to keep track of the diversity of the households included in the study and to guide my selection for new interview participants.

In the mornings before setting off for an interview, I engaged in participant observation at my host family's home, and I held informal conversations with villagers who visited the shop. I also used these conversations to identify potential new informants for the interviews as people from both farming households and landless households came to buy products at the shop. I did not take notes during participant observation and informal conversations, but as soon as possible after; always the same day or early in the morning the next day. The evenings were planned around visits, either to a new household for an interview, or a known household for a more informal conversation. To keep these conversations informal, I did not bring a notebook, nor did I make any recordings. I relied on my memory to write elaborate notes after returning home. I conducted preliminary data analysis while writing my notes by highlighting interesting observations that I should collect more data about.

In the second period of ethnographic fieldwork, I focussed on conversations and participant observation to fill in the data gaps I had identified. My strategy for taking notes was identical to the first period of ethnographic fieldwork. For participant observations as well as informal conversations I relied on the informants I had met during my previous stay in the village with whom I had built rapport and could converse freely with. Participant observation did not follow much of a strategy, as it was a combination of observing everyday life and special activities for which villagers invited me to join. Most of the participant observation was therefore guided by opportunity rather than strategy.

As already seen above, data analysis was a continuous process that started right after the first day of my stay in Katuyanur. The most comprehensive periods of data analysis, however, took place in between the two field visits to Katuyanur and in the months after returning from my second stay in the village. During the six months in between field visits I spent seven weeks transcribing all the interviews and started my data analysis of these transcripts and all my fieldnotes in NVivo. While analysis was already ongoing in the field through making and highlighting notes and reflecting on my research activities, the full analysis of the transcripts, interview notes, and fieldnotes after completion of fieldwork was done in NVivo. Coding and categorising all sections of the transcripts and fieldnotes, based on the research objectives, led to 31 separate topics. I used these topics to uncover patterns and connections between sections of the interviews, between sections of the fieldnotes, and between the interviews and fieldnotes. These connections helped develop the themes in this dissertation. The codes I used to comb through all my data were a combination of codes derived from my topics of interest developed based on my reading of relevant literature and codes based on topics that came up from the data recorded in the interviews and fieldnotes. I used these codes to organise and sort my data, to synthesise the data to uncover patterns and links, and to summarise some initial findings. The theory and data thus both guided the data analysis. I reviewed the links and patterns found in the data analysis and made notes on where data was thin, where clarifications were necessary, and where follow-up questions arose. Before returning to the field, I revised my topic list to ensure all topics that required additional attention were included.

4.6 Reflections on Methodology

The longer I stayed with my host-family, the more I became part of the household. During my last weeks, Rani introduced me to people as *contam*, a concept that connotes a diversity in meanings and entitlements, one being of the same kind, belonging to the same kin-group. In the beginning Rani did not allow me to help her with cooking, but towards the end of my second stay I frequently helped with cooking, and she sometimes asked me to help with household work such as sweeping the rooms or hanging laundry to dry. This change had taken time, as for most of my stay she had not allowed me to sweep; she would take the broom from my hands if I attempted to help. Rani always ate her meals after I finished mine, and she served me everything while never allowing me to serve her food, not even allowing me to get the salt from the kitchen if she thought her food needed more. Only in my last couple of weeks she let me give her a plate

of rice or ask me to get her something. During my second stay I also helped with the shop whenever I was at the house as I got to learn the different prices of the items sold in the shop. While this acceptance was important for my research, my host-family's sense of responsibility for me was occasionally restricting. For example, Gayatri had asked me to join her and another woman to a big temple some distance away where there would be an important Hindu festival during the night. We planned to leave at 7pm, spend the night at the temple and come back around 6am the following morning. I told Rani about it, but I did not think of asking permission from her and her husband to go. On the day of the festival, Sethu told Rani I could not go there at night since there would be men drinking and it would be unsafe without a man accompanying us. I felt this was exaggerated since the festival was very popular and crowded with police officers present to control the crowds. However, I did not want to go against the wishes of my host-family as continuing a good relationship with my host-family was important for continuing my study, and because I did not want my host-family to get into trouble if something would happen. I thus had to tell Gayatri I could not come with her. My stay in the village also impacted my host-family, particularly Rani. She stopped doing agricultural wage labour for the entire time I stayed at her home. When a group of women discussed working in a factory in Salem, they tried to convince Rani to join them. Although Rani never explicitly said so, I had the impression that my stay at her home played some part in her decision not to join the women.

Relationships are not only built for the purpose of data collection; the relationships are real. This made it increasingly difficult to distinguish life in the village with research in the village. Immersing myself in the village and in village life was easy, but also resulted in a challenge to continue doing focussed research and not to get lost in village life. This challenge continued after returning to London, when I sat in the British Library working on transcribing interviews and I saw London, but heard the village through my headphones, and when I was writing up this dissertation at the library of the London School of Economics while receiving WhatsApp messages from some of my informants with news about the village or just wanting to check in. That the relationships I was building with my informants were real also meant that I could not be an objective outsider who only collected data on the experiences, perceptions, and ideas of their social world. My informants asked me questions or asked for my opinions or views on my world and on theirs. This became part of the data as my informants would agree or not agree with me and our conversation would continue based on my judgement, view, or experience.

This did not mean I ever became an insider. On rare occasions there were meetings at the school for which I was not invited. In such situations I stayed away rather than crash the meeting. Even though the village was small, and I stayed there for three months, at the end I still did not know everyone, nor did I fully understand all social relationships. At the beginning of my third month in Katuyanur Rani's grandmother passed away. I had not known Rani still had a grandmother, despite her living just on the other side of the ST hamlet. As explained earlier, for certain activities I was excluded, like coming to work with informants or join them to the forest, as they assumed that I was physically not up for it as I had never

done that kind of work. Remaining an outsider, particularly a foreign outsider, also had advantages because it made villagers curious about me and my research and keen on inviting me to their homes.



This research was not my first encounter with rural India, as I had done an ethnographic study in rural West-Bengal and in rural Tamil Nadu, between 2015 and 2017. It was also not my first encounter with Tamil Nadu, as I had visited Tamil Nadu six times since 2010 (in total I had spent 15 months there), twice doing ethnography for my undergraduate and graduate degree. However, these stays in Tamil Nadu were in the southern city of Madurai. I had stayed in villages in Tamil Nadu, but never longer than two weeks at a time. As India and Tamil Nadu were not new to me, I took my knowledge, perceptions, expectations, and assumptions based on my previous visits with me to Katuyanur. These preconditions made my entry into the village easy and quick, while it simultaneously prohibited an entirely fresh look on this new research location with new informants. For example, I had helped with cultivation for many days during previous visits to India, so during my stay in Katuyanur I was not too keen on doing participant observation for agricultural work. Mainly because I thought I understood enough of what goes on during such a day and knowing how demanding it would be physically.

Other conditions, unrelated to my previous visits to India but related to my gender, education, marital status, beliefs, perceptions, and moral values, also influenced how I looked at things and people, and it influenced how villagers saw and treated me. For example, my gender is an important reason for most my data coming from participant observations and conversations with women instead of with men. When I was 'hanging-out' I was hanging-out with women in or near their homes rather than going out to town with men or join them in playing cards or cricket. During temple celebrations I sat among other women, not among men. This is what DeWalt and DeWalt (2002) refer to as 'ethnographer bias'. Although I could not remove this bias, the use of multiple research tools, particularly interviewing men as well as women, and being aware of ethnographer bias reduced this bias. The fact that I am not married meant women did not discuss 'married-life' with me and often consciously excluded me from such conversations. My educational level and reason for being in the village sometimes gave informants the impression I could change things for them by writing or contacting the collector or other government officials. One example is that villagers asked me to report to the collector about alcoholism and gambling so that both would become illegal and disappear. While I attempt to be as accurate and non-judgemental as possible describing events, conversations, and interviews, what I have included and what I have omitted in this dissertation resulted from my choices, just like the research topics I paid attention to in the field. My personal beliefs, expectations, and motivations can therefore never be entirely isolated from what I have presented here.

The ethnographic fieldwork took 14 weeks, a little over three months. Ideally, I would have stayed in the village for an entire year because food security and food access fluctuate throughout the year,

influenced by cultivation seasons. However, constraints on time and finances only allowed me to spend three months in Katuyanur. This has affected the depth of my understanding of the village in relation to my research questions, but the fact that I was not new to Tamil Nadu and had spent three months in Salem for fieldwork before the start of my ethnographic data collection gives me confidence that I understood the local context well enough to be meticulous in my data analysis, to paint a picture without data gaps, and to give an honest portrayal of the local context. Claims or conclusions based on a small number of observations for which I am unsure if the observation is an exception or a rule, I have tried to be explicit about this uncertainty. Interviews were conducted at the homes of informants, sometimes with both spouses present. Intra-household gender relations may influence the ability of one spouse or another to speak freely, but in my experience, women were as vocal as men during these interviews and were not apprehensive to contradict or challenge what a husband said. For cooperative conflict in social units beyond the household, the fieldwork may have been insufficient in time. These cooperative conflicts are rarer, perhaps based more on reciprocity where many months can go by between action and reaction and therefore not as frequent to observe compared to cooperation within the household.

The conceptualisation of validity in qualitative research is part of a long, complex, and widespread debate in which dozens of different wordings, components, ideas, and approaches are used (Dennis, 2013). Using multiple methods allows 'multiple sources of confirmation' to draw conclusions; thus increasing the validity and reliability of those conclusions (Willis, 2007). Combining interviews with participant observation and having access to the survey data allowed me to cross-check findings and observations. Regarding considerations of the local context as important is not because a local focus would be more real, authentic, valid, or reliable, but because with the great heterogeneity of societies, even on small scales such as a village, there are no general rules that apply to all villages and all social groups. Therefore, without an understanding of local contexts, generation of general rules and perceptions of authenticity do not recognise diversities within societies. Ignoring heterogeneity and local differences would lead to an oversimplification of social life.

Qualitative research highlights the *situatedness* of knowledge, rather than looking for rules and generalisations (Willis, 2007). However, a discussion on generalisation is important in this dissertation, as the aim of this research relates to an interest in gender equality. The composition of Katuyanur in terms of caste differs from Tamil Nadu as a whole, i.e., in Katuyanur the Malayali were the majority population, while in Tamil Nadu ST communities represent only 2% of the total population. The results of this study may not simply apply to any other community, population, or village, at any moment in time, but this does not mean generalisations cannot be made at all. Larsson (2013) argues there are various meanings of generalisation that depend not only on a contrast between qualitative and quantitative research methods. As the roots of inequality are interwoven in multiple layers of power specific to time and place, recognising and understanding these connections allows for generalisation of findings. Understanding how specific

situations and contexts contribute to power differences and to inequality provide increased detail in predicting in which situations the results are generalisable and in which situations they are not. For example, the farmers in Katuyanur, regardless of community, consisted of a similar high proportion of marginal farmers as in the whole of Tamil Nadu. The specifics of the local context does not mean the results from this study are only generalisable to people and communities in identical situations. Larsson (2013) argues that context does not determine the results. Just because contexts are similar does not mean a phenomenon is the same, nor does it mean that different contexts cannot have the same phenomenon. There are always more variables in a social context than one study can include. Thick description helps to gain a fuller understanding of variations within a context and variations in phenomena within the same context and these results then increase generalisation to other similar contexts. The patterns found in this research, despite heterogeneity within the local context, thus increase generalisability as the pattern transcends a specific homogeneous context. Since the local context is crucial to make sense of the found results, the conclusions derived from this research remain context specific. The findings might therefore not uphold in an entirely different context. There is no universal rule that applies to all social situations because of differences in contexts, which contributes to the importance of studies that focus on the local level. The descriptions of the local context that I provide in this dissertation contribute to a holistic understanding of caste and gender inequality related to access to land and food security. Even though the number of informants (34) is small to represent the whole population in Katuyanur (800), they are still the experts of their society and social organisation and with varied personal backgrounds to provide diversity in perceptions and understandings of social norms and practices. The relevance of the research topics and findings also depend on the local context. For example, in urban areas, where livelihoods are non-agricultural, the findings of this research are irrelevant. Although the generalisability of this research is limited, this study contributes to the overall knowledge and adds to (future) studies on the same topic but within different contexts. Comparing various contexts makes it possible to generalise results and conclusions.

In order to link this study with studies on similar topics I framed my data analysis against three theories: the entitlement approach, the bargaining approach, and a bundle of rights metaphor. However, I ran into a problem with my broader view on access to land, as opposed to only rights in land, where property-relations, within households as well as between households, were not always based on rights and access to land was not always an entitlement.

4.7 Ethics

Ethical approval for this study was sought and obtained from the UH Ethics Committee well before data collection started. The ethical approval was given for the entire UKIERI research project, including data collection through ethnography for my PhD research. While in the field, particular attention was given to obtaining written informed consent from all interviewed households. This aspect of *written* consent was

new to me, as in previous studies I conducted verbal informed consent was sufficient. Incorporating this new form of obtaining consent was a little awkward at first, as it made the interviews start much more formal compared to starting an interview with verbal consent only, but I quickly got used to it. For observations I made in public I did not obtain written consent, but for data derived from conversations I did.

The majority of the data I collected and was interested in was not really sensitive data. Only on a small number of occasions did I have to be careful with reporting certain activities. Also, informants did not shy away from telling me when I should not include certain things into my reporting, so often I did not have to make such decisions myself but simply listened to my informants wishes. A potential risk of long-term fieldwork is that informants forget my role as a researcher. Even though I obtained written informed consent from each informant before interviewing them, informed consent is a process of constant (re)negotiation. For example, informants may consent to taking part in the research in general, but certain activities or information they may want to exclude from the research. If informants get used to my presence and forget my role as a researcher, such activities or information can end up as data if the informants do not tell me I should exclude it. The time I spend in Katuyanur was limited and split into two visits, which decreased the potential of informants forgetting my role as researcher. A reminder for informants about my role was that in the mornings and evenings I sat outside my host-family's house on the veranda to write notes. Villagers who passed by often made a comment about me writing down everything I see, hear, and ask. Although I had not done this on purpose, this public activity reminded villagers I was doing research.

Reminding informants that I was collecting data from them also influenced which information they chose to share with me. Sometimes informants kept information or gossip away from me. I noticed people sometimes stopped talking when I joined them, or if I asked people what they were talking about they would respond, 'Why? Are you going to write about it?' instead of answering. This did not mean I was unwelcome, but villagers were conscious of what they did not want me to write about. As Strathern (1999) aptly describes, people are not only informants in the sense that they answer my questions, but they are informants who control which information they share. There were several concrete situations in which informants choose not to share certain information. One such occasion was when Rani had been talking quietly with a neighbour for over an hour. I asked her afterwards about the content of the conversation, but her reply was vague, saying it was just some work discussion. I thought there was more to it as they had been speaking in a low whisper, but Rani did not want to share more. On another occasion Gayatri came to visit and took a seat next to Rani and me on the steps in front of the shop. Rani and Gayatri started talking in soft voices, and suddenly Gayatri turned to me and asked if I could understand what they were saying. Rani answered for me, saying I could not, and they continued talking in hushed voices. It thus seemed Gayatri did not want me to know what they were talking about. Informants thus controlled which information they wanted to share with me and which information they did not want to share. Sometimes

informants also saw me as a source of information. Depending on the information they were looking for, whether it was advice on jobs or studies, or to know if I heard any recent developments of gossip, I either tried to help or I said not to know anything.

Protection of anonymity and keeping collected data private was at times challenging because of working with students used to different ethics procedures. This meant explaining the participant information sheet and consent form extensively to my interpreters so they would understand the need of them and could clearly explain both documents to potential informants. The research assistants' training as part of the UKIERI-project's household survey included half a day on research ethics, but during the first couple of days of survey data collection some research assistants' understanding of ethics and the need for ethics procedures were still insufficient. This meant addressing problems regarding ethics procedures as they arose during the data collection. On a case-by-case basis, a few research assistants had to be reminded of the ethics training. For example, on the first day one research assistant took pictures of an informant being interviewed without asking the informant for permission.

During my ethnographic data collection, I maintained careful habits to protect my informants' identities and the data they had provided me. Most importantly, my fieldwork notes were digital, and password protected. I also kept a diary that I kept in my locked suitcase and wrote in Dutch, so if a villager would accidentally see it, for example, when I was writing, they could not read it. I did record all interviews on a device without lock but transferred them to my laptop immediately after. All data was collected anonymously and my fieldnotes used a code system known to myself only to refer to certain informants. In the final write up of my dissertation I used pseudonyms to refer to my informants.

4.8 A Note on Classification of Caste

The Government of India groups castes into a hierarchical system based on their socio-economic vulnerability, or 'backwardness'. Labour opportunities and landownership are strongly tied to caste, resulting in an overlap between caste and class (Mangubhai, 2014), although Kapadia (1995) observed that this overlap is reducing significantly in South India. The castes who are not vulnerable or 'backward' are referred to as Forward Caste (FC), or General Class, and are part of higher castes who do not qualify for the government's reservations for education, employment, political representation, and social security schemes.

The castes in this dissertation belong to Backward Classes (BC), Most Backward Classes (MBC), Scheduled Castes (SC), and Scheduled Tribes (ST). Within each category a great diversity of sub-castes, or *jati*, exists.

I often use caste and community interchangeably and I refer to community at various levels; the village community, which includes all castes, and the Malayali community, which refers only to those households belonging to the Malayali caste.

People from ST communities are also referred to as tribal or Adivasi peoples. Dalits, previously called untouchables, belong to the SC castes. In this dissertation I mainly use the categories ascribed by the government, although for the ST community in Katuyanur I infrequently refer to them as tribal, or to their specific community: Malayali.

4.9 A Note on Classification of Land

The unit used to classify arable land is in acres. This unit of measurement is used by the informants themselves and by the Government of Tamil Nadu. The government makes a distinction between housing land and arable land. Housing plots are small, therefore the measuring unit used for housing land is in cents. One cent equals 0.01 acre.

The Government of Tamil Nadu classifies farmers into marginal/small/big farmer based on the size of land and irrigation facilities. Marginal farmers have up to 1.2 acres wetland (with irrigation facilities) or up to 2.5 acres dryland (no irrigation facilities). Small farmers have between 1.2 and 2.5 acres wetland or between 2.5 and 5 acres of dryland. Any farmer with wetland greater than 2.5 acres or dryland greater than 5 acres is considered a big farmer (Interview with local VAO on 5th July 2018).

The Agriculture survey makes a distinction between marginal landholding (below 1 hectare, or 2.47 acres), small landholding (between 1 and 2 hectares), semi-medium landholding (between 2 and 4 hectares), medium landholding (between 4 and 10 hectares) and large landholding (over 10 hectares).

This study did not consistently collect data on whether land was wetland or dryland, therefore the marginal/small/big farmer classification used in this dissertation is based on the land sizes of dryland.

The VAO issues farmer certificates based on their classification. Marginal and small farmers can apply to a variety of schemes, programmes, and services offered by the Agricultural Department, while big farmers are either ineligible or given lesser priority for receiving these benefits.

Chapter 5 - Access to Land: Meanings, Patterns, Practices, and Negotiations

In India, access to land, particularly landownership, is far from equal. Landownership is highly gendered and associated with high castes. The literature and data discussed in section 3.4 established that ST and SC households are more likely to be landless, more likely to be marginal- and smallholders, and more likely to have insecure forms of access to land compared to households from other communities. The same section showed that gender inequality in access to land runs across caste, although not all women from all backgrounds are in equally disadvantaged positions. Despite introducing equal rights to inheritance in landed property among sons and daughters in Tamil Nadu in 1989, agricultural land operated by women in 2015-16 comprised only 19.7% of all operational landholdings, which is only a small improvement from 16.5% of all operational landholdings in 1995-96.

Against this backdrop of social inequalities embedded in access to land, this chapter focusses on the various mechanisms through which access to land is obtained in Katuyanur and on the various arrangements of access to land, or the rules of access, that are prevalent. As discussed in section 2.4.1, the extended entitlement approach can be used to explain how endowments are obtained, in addition to how entitlements are obtained. It is important to remember that while Sen (1981) defined endowments as what is owned and Leach, Mearns and Scoones (1999) defined endowments as the rights and resources that social actors have, I conceptualise endowments as the assets, rights, resources, and labour social actors can access, i.e. benefit from. The endowment of interest in this chapter is access to land. In section 2.3, several mechanisms through which social units can gain access to land were identified. These mechanisms included exchange, membership, intra-family transfers, intra-community access, land markets, land reform, and labour and capital investment. To establish which mechanisms of access are prevalent in Katuyanur and for which access arrangements, the extended entitlement approach and bargaining approach are used as frame of reference, while a bundle of rights metaphor is used to establish the rules of access.

A bundle of rights metaphor explicitly recognises the various arrangements of access to property that can exist (Meinzen-Dick *et al.*, 1997) and refers not to the rights *in* access but to the rights *derived from* access. As can be recalled from Chapter 1, a bundle of rights can be used to refer to all property rights and obligations that exist within one society. The current chapter focusses on all property rights and obligations that exist within one village. The debate around a bundle of rights, discussed in section 2.4.2, suggested that the five independent rights identified by Schlager and Ostrom (1992) for common property may also apply to other types of property and to social actors within and beyond communities. Critics argue that a bundle of rights metaphor is inflexible and portrays separate sticks within a bundle as independent, and as such does not allow for overlap of rights and ignores the interconnectedness of people and their

environment. This chapter will show that a bundle of rights metaphor does recognise the possibility of overlapping rights as well as flexibility to adjust depending on the local social and environmental context.

Almost all land in Katuyanur is private property, one of the critiqued 'Big Four' property types; the other property types being open access, common property, and state property (Benda-Beckmann, Benda-Beckmann and Wiber, 2006). The Government of Tamil Nadu has registered these lands as private property and has issued *pattas* to the owners. Devereux (2001) wrote about the 'fuzziness' of property relations; the possibility in which control over the endowment and control over the entitlement can be held by different social actors. This chapter unpacks common arrangements of access to landed property in Katuyanur by identifying the various bundles of rights derived from these properties by various social groups or individuals. Doing so reveals that a bundle of rights metaphor is also useful to explain property relations in property types other than common resources and problematises categorising land into four big theoretical categories. This will support the three arguments made in this chapter. First, categorising property types into the 'Big Four' obscures the diversity of bundles of rights existing across these four categories and overturning this categorisation also means that the five rights identified by Schlager and Ostrom (1992) can be applied to property types other than common property. Second, the 'fuzziness' of property relations, i.e., the various bundles of rights that can be derived by different social actors from access to land, facilitates bargaining over access to land and over rights derived from this access. Clearly, bargaining is possible because, as Choudhary (2015) also argued, informal agreements can take precedence over formal arrangements. The consequence of this bargaining within property relations is that bundles of rights have become gendered as property relations are embedded in kinship systems. Third, the bundle of rights recognises hierarchies in bundles of rights but does not recognise the possibility of hierarchies within specific rights of a bundle. However, an apparent identical bundle of rights may in fact not be identical, as certain rights in a bundle may be temporal, hierarchical, conditional, or with restrictions.

To support this argument, this chapter starts with a discussion on villagers' connections to land, to demonstrate that land is more than an asset the value of which is determined by forces of supply and demand in the land-market. Understanding people's connections with land at the outset, as a space that generates memories and familial continuity and is embedded in kinship, is important in order to make sense of decisions people make, especially those decisions that do not always seem the best rational choice to maximise a household's economic status, a discussion returned to in subsequent chapters. The chapter continues to explore gendered patterns in landownership within the village of Katuyanur, paying attention to caste and gender. Most land transfers take place through inheritance, in which gender plays a crucial role. The gendered practice of inheritance of landed property is the following topic of discussion, in which five reasons why daughters should not inherit land are examined. I conclude this chapter by demonstrating that access to land in Katuyanur is not limited to landownership. Those who can access land, i.e., benefit from land, are not always the owners, although differences in access do exist, as differences in the bundles

of rights demonstrate. These differences in access also mean that bargaining can take place over access arrangements, i.e., the specific bundle of rights.

The main findings in this chapter are that ownership over arable land is concentrated among men, regardless of caste. Using the extended entitlement approach to understand how landownership is obtained shows that rigid patrilineal inheritance practices severely limit women's landownership. Furthermore, social consequences prohibit women from initiating a bargain about inheritance of landed property. Bargaining about inheritance of landed property between brothers and sisters is therefore extremely rare. Landownership is also characterised by caste, as landlessness only exists within the Malayali community. However, access to land is not only about individual ownership over arable land but includes other forms of access and other types of landed property. Since Malayali households are least likely to own arable land, these other forms of access to arable land, housing land, state-owned property, and forests, among others, are most important to the Malayali community. Each type of access is accompanied by a specific bundle of rights for communities, households, or individuals and vary over time and space. Social units with a bundle of rights derived from a specific property bargain over the content and continuation of their bundle. The discussions in this chapter demonstrate the benefit of using a bundle of rights metaphor in analysing access to land, while simultaneously demonstrating that while the five independent sticks identified by Schlager and Ostrom are useful to understand the various arrangements that can exist between multiple social units and properties, the categorisation of rights assumes equal rights to those social units who command an identical bundle. These five categories thus ignore the fact that hierarchies exist even within one specific stick.

5.1 Land: Asset or Ancestral Connection?

The (extended) entitlement approach discussed in section 2.4, considers land as an asset that is owned. While scholars referring to this theory acknowledge that these assets can have social meanings, the emphasis is on materiality; it is something that can be exchanged or sold. Nitya Rao (2017), on the other hand, emphasises the embeddedness of land in gendered meanings and identities, thus suggesting that land is not just an asset solely valued by supply and demand within the land-market. More specifically, Lund (2011) writes that claims to land are partly based on social identity and social identity is partly based on rights over land, thus emphasising a two-way link between land and social identity. The connection between land and people can according to Carrier (1998) be considered in two different ways as he makes a distinction between 'inclusive' and 'exclusive' notions of property. An inclusive notion of property "is embedded in and reflects durable relationships between those people implicated in its past" while exclusive notions of property consider an object "under sole control of and associated only with the person who happened to own it at the moment" (Carrier, 1998, p.86). As discussed in section 2.4.2, Benda-Beckmann, Benda-Beckmann and Wiber (2006) consider a different perspective on the various notions of property by suggesting the embeddedness of property in four 'layers of social organisation'; ideological,

legal institutional, social relational, and quotidian practice. The concept of land thus may be much more complex than land only being an asset.

Land is indeed an important asset in rural societies, but people's connections to land make land personal and money alone cannot express the value of land. Current landowners in Katuyanur associate their land with their ancestry and would never willingly sell the asset of their parents and forefathers. Landowners relate to the hard work their forefathers had put in to become landowners and the subsequent time, money, and labour they had invested in the land. A 60-year-old farmer would never leave farming or his land, his home; he does not even want to think of leaving it behind because he is the second generation taking care of the land and after him his son will take care of it. Villagers are proud to be a second or third generation landowner and do not want to dispose of something previous generations worked hard for. A typical response to a question if they would sell it to move elsewhere for a well-paid job or to exchange the land for more productive land elsewhere was that of a young ST woman:

We will not sell. This is given by his [my husband's] grandfather and grandmother, by my father-in-law's father and mother. Because of sentiment we will not sell it. It was their land. Now it is our property, so we will not sell it.

A few women willing to exchange land were conscious their husbands would be less willing since the husbands' parents have given the land; it was the land of their husbands' ancestors and thus their husbands would be more sentimental to keep it. Pandi, a young farmer, gave up his job outside the agricultural sector to return to his village and help his mother cultivate their 6 acres of land. He intends to stay in the village because "this is where my grandfather stayed and where he died." Landowners, regardless of their caste, thus directly associate their land with their ancestors instead of considering it an asset they can relinquish, supporting the argument by Benda-Beckmann, Benda-Beckmann and Wiber (2006) that the social identity and the continuity of groups relate to property and inheritance practice. However, this association relates less to the social identity and continuity of a wider caste or community than to that of a family.

Households who do not own arable land are no less connected to the place where they live. Like landowning households, their housing land and the village is where they themselves or their children were born and the memories of their own childhood and their children's childhood are deeply embedded in the land. A landless man stated matter-of-factly: "This is the place where I was born. In the place where I was born, I will die." While it might appear easier for landless households to pick up their things and move in pursuit of economic opportunities, their memories embedded in the village are stronger than prospects of better economic circumstances elsewhere. Villagers thus feel rooted in Katuyanur because of ancestral connections, their own birth, memories of their childhood, and memories of their children growing up.

Social support, embedded in the village, is another important reason to stay in Katuyanur. A landless couple contrasted the village with a city in explaining why they do not want to move:

Husband: This is my birthplace, all my relatives are nearby, now when I go to a city, maybe after 10 years the area [of the city] will be familiar to me. In this area we do not have any problems. If a neighbour has a problem I help, if I have a problem a neighbour helps. That does not happen there, it is different in the city.

Wife: There [in the city] you shut the door and do not step outside. We only shut the door at 10 o'clock, the rest of the day it is open.

Husband: Whenever we hear a sound, we go see what is happening. That does not happen in the city. If someone is getting a beating, no one cares.

Informants thus prefer to stay in the village where people care for each other and help each other if a problem arises. Mohan, a landless villager who works at the local Fair Price Shop, has a strong sense of community with the other ST households because of the loss of land his family suffered along with many other ST families. Other villagers did not refer to common suffering as connecting them but referred to kinship as the source for connection. Because of inter-marriage among the ST households since the first Malayali people settled in the area as labourers, all ST household in the village are related to each other. Villagers from the ST community emphasised that being surrounded by their relatives, by people whom they can trust, makes this village their home. One landless man explained that whenever his teenage daughters walk along the main road leading to Katuyanur and someone passes by, they always get a lift. He argues the village is better and safer than a town, since everyone in the village knows his daughters, so neighbours help, which they cannot expect in a town. Anuja grew up in Katuyanur where she now lives with her husband. She feels protected by living in proximity to her parents:

My mother is nearby. In a different place no one looks after me. Here if I come home at 10 o'clock, it is no problem because my mother and father are nearby. If I am somewhere else no one will care for me, so how can I then go out at night? I cannot go.

The comfort of knowing everyone in the village and being able to rely on neighbours' and relatives' support results in the belief that Katuyanur is safer compared to other places.

Even for BC and MBC households, whose network of relatives in Katuyanur is much smaller compared to ST households, the village is an important source of social support. Prema and Radha, a mother and daughter and MBC farmers, described Katuyanur as their home because they are familiar with everyone and everything. They know the village is safe, that they like it, and that it is a good place for them to live. There is no guarantee another village or town will be similar, so they stay here. The two men in their household work away from home, leaving these two women in the house with four young children, but they feel safe and supported by their fellow villagers. If one child is sick, they can always find someone to take them to the hospital. However, when I came back to Katuyanur after seven months, Prema and Radha's house stood empty. I could not find out why they had left, nor where they had gone.

Women's circumstances differ from men's because women cannot choose to spend their entire life in the same place where they were born. Women are expected to move to their husband's home after marriage. Radha explained that even though only her husband was born on the land they now own, she has a strong bond to that land. Even her mother, who moved to the house of her son-in-law after her husband passed away, put her right hand on her chest while saying she experiences the same strong connection to the land owned by her son-in-law. Ambika moved to Katuyanur after her marriage, into the home of her husband and parents-in-law. Even though she was not born here, she feels a powerful connection to her household's land:

My heart is attached here, this area is where my children are born. This is comparable to seeing my children. Before I saw them, I did not know who my children were, but now that I have seen them, they belong with me. Like that my heart now belongs to this place. Now if I go somewhere else, my heart will feel not right. (...) I have been here for 17 years, my husband was born here and grew up here. His father and mother were here, his brothers, his sister. There are powerful emotions. They loved each other very much, were happy. I came from my mother's and father's home here, how can I be as happy here as I was in my father's home? Like that he [her husband] has that here. We have our own land here, if we sell it and move elsewhere, it will be hard for him to think of his old place. We are now here, we know and care for everyone along this road. We had two dogs that died. My children cannot forget them. They find it very difficult. Like that, we cannot miss our family.

Her attachment to the land has grown over the years, with each new memory created. She compared the connection to land to the deep attachment a child feels for a pet; their memories are attached to the land, even after they have gone. She has a strong connection to her household's land, but this connection simultaneously conflicts with the happiness she remembers at her parents' home, where she was born.

From a young age, girls are told by their parents that after marriage they will leave home. The position of girls in Katuyanur is not unlike the position of girls in other patriarchal communities in India, as described by Dube (1997). In Katuyanur, a girl's husband's home will become her new home. She can come to visit her parents, stay for a few days, but then must go back to her husband's home, where she now belongs. A Malayali farmer feels more connected to her husband's land, where she lives now, because she knows she cannot go back to where she was born. Her brother will look after her for four or five days, but her sister-in-law would want her to leave as soon as possible. Women are not welcome to stay in their natal home for a longer time; they do not belong there and pose a burden to a brother and his wife while staying with them. Women's loss of connection to ancestral land is dismissed by arguing women receive land through husbands. Radha cannot be happy in her husband's home if she keeps thinking of her natal home. While the land where she was born is close to her heart, she should not long for that land because

she got married here in Katuyanur. Women's greater emotional connection to the land where they live after marriage compared to their birthplace partly results from conditioning and self-protection. A woman may feel she belongs to the home of her birth, but her parents, husband, and family-in-law tell her otherwise. Even though women create new memories and emotional attachments in the household and village of her husband, this does not mean it replaces the emotional connection to the natal home and village. Women's social experiences related to ancestral land and to home thus differ from men who spend their life where they are born.

Land thus not only constitutes an asset, but is entwined with memories, with social relationships, and with connections to past, present, and future generations. Villagers' notion of land is thus mostly embedded in the socio-relational layer of social organisation. Carrier's (1998) distinction between 'inclusive' and 'exclusive' notions of property is very helpful as an 'inclusive' notion of land is prevalent in Katuyanur, however the relationships embedded in the land mostly relate to the family rather than a wider community. Connections to land are not only sentimental but also result from fear of change and difficulty of adjusting to an unfamiliar place and unknown people. Antonsich (2010) identifies five factors that contribute to emotional attachment to a place; auto-biographical factors, which relate to (childhood) memories and personal experiences in a particular place, relational factors, meaning positive long-lasting relationships with others in that place, cultural factors, most importantly common language, religion, practices, and traditions, economic factors, providing stable material circumstances or economical struggle, and legal factors, including citizenship and resident permits. Based on the empirical evidence provided here, auto-biographical factors and relational factors are the most important considerations for the villagers in Katuyanur, although these are experienced differently by men and women. Most villagers choose not to leave Katuyanur, but various obstacles prevent villagers from relocating as well. Such obstacles include not knowing any occupation other than agricultural labour, being uneducated, and the high cost of living in towns and cities, which would relate to the economic factors described by Antonsich (2010). I discuss such obstacles later in Chapter 7.

The (extended) entitlement approach used in this study perceives links between land and food as rational and objective, i.e., what is theoretically possible, so it is important to keep in mind that in decision-making, people do not always behave rationally to maximise their resources, particularly in communities where farming is a livelihood for meeting minimum needs, not about increasing and maximising capital. While households may theoretically be better off economically by selling their land, or spending all available money on food, they may hold on to land, or spend money on non-food, resulting in food insecurity. While the (extended) entitlement approach remains useful in understanding how assets such as land can contribute to command over food, it is important to keep in mind that a perspective of land as something that can be exchanged is only one among many meanings of land.

5.2 Gendered Landownership

Ownership within the bundle of rights is generally associated with the right to alienate the property (Doss, Summerfield and Tsikata, 2014). While there are gender differences within all separate rights of a bundle of rights (Meinzen-Dick *et al.*, 1997), these differences are particularly visible within the right to alienate private property (Doss, Summerfield and Tsikata, 2014). The Government of India registers ownership over private land, which includes housing as well as arable land, and issues the owners *pattas* for these demarcated properties. As discussed in section 2.4.1, the extended entitlement approach not only considers how entitlements are obtained from endowments, but also how endowments are obtained. The current section and section 5.3 both focus on access to land as endowment characterised by ownership. In Katuyanur there were four mechanisms through which access to land through ownership was obtained: a government donation, sale, an intra-household transfer of ownership, and inheritance. Ownership is associated with the right to alienate the land, although ownership does not guarantee this right. This is seen with the housing plots the government donated to Malayali households in the ST hamlet (see section 3.6), which became privately owned by women but had restrictions in terms of alienation. The women owning these housing plots can transfer the land to whomever they choose, but only after 30 years of ownership. Alienation of privately-owned land generally occurs through sale or a transfer of ownership, for example through inheritance or an intra-household transfer for reasons of eligibility in government schemes. The Panchayat Secretary explained that the number of households owning arable land in the Panchayat Village decreased in the last 40 years because people sold their lands to pay for expenses such as marriages and medical bills. Indeed, as section 3.4.2 showed, landlessness in rural Tamil Nadu increased by 4.8% between 2005-06 and 2015-16. However, alienating landed property through sale is rare in Katuyanur. As argued in section 5.1, people feel connected to their land and are therefore unwilling to sell it. However, financial stress may leave people with no other choice. In Katuyanur, only few households have sold (part) of their arable lands after the period of starvation 40-50 years ago. Among the interviewed informants, none of their households had sold or bought arable lands in the last 40 years, but among the 103 surveyed households, 11 had sold land in the recent past.

As mentioned earlier, the local VAO estimates that for the Panchayat Village that includes Katuyanur, between 11% and 17% of land and housing *patta* holders are women, which would be considerably below the rural Tamil Nadu average of 28.4% for arable land and 36.4% for housing land (Government of India, 2017b). Indeed, the household survey revealed that among 51 households with ownership over arable land in Katuyanur, less than 14% of the landholdings were owned by women alone, and less than 8% were owned jointly between spouses. All these women were married, almost three quarters of these landholdings were marginal landholdings, and split between ST and MBC households. Among the 12 interviewed households with access to arable land there were 15 *pattas* to arable land, of which only four in women's names (various castes, all these women received the land while married, three

marginal farms and one big farm) and none on both spouses' names. Thus, while caste is not much of an indicator for likelihood of women owning land, marital status and land size are, as all women owning arable land are married and close to three quarters of the landholdings are marginal landholdings. This is an important finding as Agarwal, Anthwal and Mahesh (2021) found that widowed women were more likely to own land compared to married women, but all the women who own land in this study received this land while married.

Housing *pattas*, which only exist within the ST hamlet, are more often registered in women's names. In eight of the informants' households, there were a total of 11 housing *pattas*, held by nine women and two men. None of these women had shared ownership with a husband. Villagers had mixed feelings regarding *kootu patta* between spouses. Joint landownership would be a better security for old age. Three landowners argued that only when parents own land will children take care of them in old age. In this situation it would be most valuable if the *patta* is joint between husband and wife because if spouses do not own land jointly, and the sole landowner dies first, the surviving spouse has no right of alienating the land or to transfer the *patta* to any person of choice and may thus still be neglected by children. According to the Hindu Succession (Amendment) Act, 2005 (HSAA), as discussed in section 3.4.2, individual property would be equally divided among sons, daughters, and the surviving spouse rather than being inherited by the surviving spouse alone. In addition, the rights a widow has for inheriting her deceased husband's land depends on whether the land is individual property or joint family property as widows do not inherit any joint family property; only sons and daughters do. Only few informants explicitly opposed joint ownership; most saw the benefits of joint ownership, saying that with joint ownership neither wife nor husband can decide alone to sell the land or use it as collateral for a loan, and when one spouse dies, the surviving spouse can continue using the land and decide what happens with it. At the same time, they did not think joint ownership was necessary, despite the benefits. Prema argued joint ownership between spouses is only necessary if a husband and wife are not on good terms or cannot agree on things; if they are like-minded, then the *patta* can be on one of their names. Women are thus less likely to own land compared to men and if women do own land, it is more likely to be housing land rather than agricultural land. While villagers, men and women, are aware of the highly gendered landownership, few considered joint ownership as a solution.

However, if a spouse dies, the specifics of ownership become crucial as the name on the *patta* determines the likeliness of a bargain over land with relatives outside the household. Anuja explained that if a husband dies and the land is on his name, the husband's brothers and sisters will claim the land saying it is their ancestral land. If the land is on a woman's name and her husband dies, his relatives cannot interfere. A Malayali widow stressed it is important for women to be named on the *patta*, because if her housing *patta* had been issued in her husband's name, his relatives would have asked for their uncle's land after his death. In widowhood, women often have to bargain with the family-in-law for inheritance of the

deceased husband's land. The widowed Priti has no access to her husband's share of her family-in-law's arable land as her brothers-in-law do not allow it. Her husband's share of 60 cents was never registered in his name, therefore she cannot use his death certificate to claim his share of the land. Instead of fighting for the land now, she will wait until her son is older and they can undertake legal steps to claim her deceased husband's land. Women rarely claim a share of their ancestral land, a topic discussed in the next section, but are more likely to fight to inherit a deceased husband's land.

In households where women owned arable land, there were clear, practical reasons to register the land in a woman's name. Pushpa was among the four women who own arable land. As an only child, she had no brothers who could inherit her father's land. Gayatri cultivated land registered in her deceased mother-in-law's name. Gayatri's parents-in-law had worked hard as wage labourers until they had saved enough to buy this land more than 40 years ago. Gayatri explained that in those days, households often registered land in women's names because men drank and wasted everything they had on alcohol, including their land. To prevent an impulsive sale of land for alcohol, Gayatri's parents-in-law decided it would be safer to register their newly acquired land in the mother-in-law's name. Although alcohol was here given as motivation for women's landownership, it might also be more evidence of the Malayali history of matriarchal descent (see section 3.6.2). In another household, a small part of the arable land was transferred to a daughter-in-law to benefit from the government's Housing-For-All scheme. The fourth household owned over 5 acres of land, which the government classifies as a big farmer, and therefore was ineligible for many subsidies, schemes, and programmes offered by the state's Agricultural Department. This household solved their ineligibility by registering a division of their land to three household members and obtaining three separate *pattas* and three marginal/small farmer certificates with which they could apply for the government's subsidised agricultural schemes. This household registered one of the three landholdings in a woman's name. Ownership for these last two households thus represented a mere formality through which entitlements can be accessed. None of the four women who owned arable land sought landownership; none of them received land as a result of bargaining. These women did not receive arable land for their own benefit; their ownership was merely an instrument for the household to reap greater benefit from the property. Even Pushpa's inheritance of land, which I will discuss in more detail in section 8.3.

I come to a similar conclusion among households where women own housing land. Among the nine ST women named on the housing (*kootu patta*), six women received the housing plot from the government, two women received housing land from a male household member to become eligible for the Housing-For-All scheme, and one woman received housing land in her name after she and her husband bought it. Again, in none of these cases did a woman have to compete (or bargain) with someone else over receiving the housing *patta*. In the case of the land provided by the government, the households did not decide who would become the owner; the government decided this for them. In the two cases where the

patta was transferred within the household, the *patta* was not the object of a bargain, but a factor in the household's entitlement to government services. The last example may have been different, but the woman had since passed, and her daughter-in-law did not know the details since the purchase took place well before her marriage. Thus, none of the women who owned land, either housing land or arable land, had needed to bargain for ownership. To put it bluntly, the ownership had nothing to do with the women, their ownership was motivated by obtaining the best situation for the household as a whole. This finding adds to the conclusion by De la Cadena (1995 in Rao, 2006), that women's increased landownership is a side effect of societal change rather than a reflection of women's increased bargaining power. Thus, while the bargaining approach remains useful to understand how women's bargaining power and landownership are interlinked, the findings presented in this section show that the women who own land in this study, either housing land or agricultural land, did not receive this land as a result of bargaining; at the time of allocating the ownership, the bargaining positions of women who obtained landownership did not differ from women who did not obtain landownership. This might be important in understanding women's bargaining power derived from landownership, as will be discussed in Chapter 8.

Women in Katuyanur are thus less likely to own land compared to men, and if they do own land, it is more likely to be housing land than arable land. Furthermore, women who own land are most likely to own marginal holdings and be married rather than single or widowed. The extended entitlement approach was useful to understand how ownership over land was obtained, with the most common access mechanisms being a government donation, sale, an intra-household transfer of ownership, and inheritance. What stands out among the women who do own land, is the near absence of landownership obtained through inheritance. Among the nine women who owned housing land and the four women who owned arable land, only Pushpa, as an only child, had inherited land. Among the seven landowning women in the household survey, four (57%) had inherited their land, while among the 38 landowning men 28 (74%) had inherited their land. Considering that the majority of land transfers are intergenerational through inheritance, women's lack of inheritance of landed property has dire consequences for gender equality in landownership, which is the subject of the following section.

5.3 Five Reasons why Daughters should not Inherit Land

Inheritance is an important mechanism through which land endowments can be obtained. The current law around succession for Hindu's in India was discussed in section 3.4.2 and showed that equal inheritance of landed property by sons and daughters was not nationally legislated until the Hindu Succession (Amendment) Act, 2005. In Tamil Nadu, sons and daughters had equal coparcenary rights to ancestral land much earlier with the Hindu Succession (Tamil Nadu Amendment) Act, 1989. Until the amendments passed, daughters could inherit property but were excluded from inheriting landed property. Widows, however, are still excluded from the inheritance of joint family property, in other words, they do not have any right to inherit land that their husband had inherited from his father or paternal grandfather. This exclusion is

quite crucial as section 4.4 showed that almost 70% of the land owned by the surveyed households was obtained through inheritance. As already discussed in section 3.4.2, the Hindu Succession Act does not apply to all citizens; inheritance among Muslims, for example, is arranged under the Shariat Laws (Application) Act 1937. While households in Katuyanur belong to different communities, they are all Hindu, and thus the inheritance law referred to in this chapter relates only to The Hindu Succession (Amendment) Act, 2005. Despite these amendments to the Hindu Succession Act, the rules of inheritance of landed property is very different in practice (Agarwal, 1994; Velayudhan, 2009).

Most informants were aware of the law regarding equal inheritance of landed property among sons and daughters. Few elderly villagers did not have accurate knowledge regarding the inheritance law. For example, one landless elderly woman stated daughters can only file a complaint to get a share of her mother's land, not to get a share of her father's land. Her daughter-in-law corrected her, saying women can similarly file a complaint if she is denied inheritance of her father's land. In another example, when the father of a landless man died, the *patta* for the house plot did not go to his mother. He reasoned that if his mother owned the plot, only his sister could inherit it. He added that in such a situation, even filing a complaint to claim a share would lead to nothing. By keeping the *patta* in a man's name, he argued, all siblings can make a claim to a share of the land. Not only villagers from the ST community related women's landownership to exclusive inheritance by daughters. A 60-year-old MBC landowner was opposed to women's landownership because only daughters can inherit that land, leaving sons with less land or no land at all. He thought the same about joint ownership between spouses (*kootu patta*), which according to him also increases daughters' rights to inheritance in landed property. Other informants used the same argument, that daughters are more likely to inherit land owned jointly by spouses, to explain why *kootu patta* is a positive occurrence. A minority of informants, particularly of older generations, thus believe that land owned by a woman can only be inherited by daughters, while land owned by a man can be inherited by daughters as well as sons.

Katuyanur's inhabitants may be aware of the rules regarding equal inheritance among sons and daughters under the inheritance law, but inheritance practice among Katuyanur's castes is patrilineal; rights to a father's or grandfather's land are with (grand) sons only. This is in accordance with the observations made by Clark-Decès (2014) and Rengalakshmi *et al.* (2006) regarding patrilineal inheritance and descent within Tamil kinship systems (see section 3.2). This does not mean daughters never inherited land. The narrative on traditional inheritance of arable land owned by women depends on community. Within the Malayali community, arable lands owned by women were inherited by daughters, while in the BC and MBC communities this land either went to daughters or shared between daughters and sons. Today, practice of land inheritance is equal among all communities; they prefer and practice patrilineal inheritance. While daughters used to inherit their mother's land, nowadays sons are the preferred heir of ancestral lands: mother's land and father's land. In most families, distributing inherited

land (agricultural as well as housing land) occurs peacefully among siblings. When families do not have enough land to provide every child with a share, deprived inheritance shares can be compensated, a point I will return to shortly, or children claim shares based on investments they made in the land. In one Malayali household, the father owned only four cents of housing land, but had five sons and one daughter. Since the land was too small for six children to have a share and build a home, only the two youngest sons received a share of the housing land. The four other children also wanted the land, but eventually waived their right to a share because the two youngest brothers had already invested in the land by building homes. If they had insisted on a share, they would have been required to compensate the investment the brothers had made. Investing in buildings increases bargaining power in a land claim, as the other party is expected to repay the investment. In this way, Rani and her husband established a claim to a relative's housing plot. They helped their relative by paying for the construction of a new house on that plot. If another relative will claim that land in the future, Rani and her husband will not agree to hand over the land unless that relative repays what Rani and her husband had invested. Thus, by investing in land, someone can shift the bargaining balance. Not because an investment makes a land claim more legitimate, but because it complicates others' claims, requiring the latter to repay the investment. Investing in land thus represents an entitlement relation in which the land itself is not the entitlement, but the buildings on the land.

In none of the informants' households was inherited land divided equally among all siblings. Only in Pandi's family had women inherited a share of the arable land. Pandi's grandfather owned 21 acres of land and before his death he had given his two daughters, Pandi's aunts, 3 acres of arable land to share, while their three brothers received 6 acres of arable land each. Pandi's aunts thus received only a quarter of what their brothers received. In ten other households there were sisters with rights to inherit landed property, but none of them received any share. In households without sons, daughters are likely to inherit landed property, as was the case for Pushpa and will be the case for Priti and Rani. Although none of the informants made explicit objections to daughters inheriting land, they were explicit that sons should always inherit land. Some parents use tactics to make certain only sons will inherit the land. One such tactic is when a household buys new land, to register it to the son. This way daughters cannot make any inheritance claim to that land. Another tactic is transferring landownership from a parent to a son, as an early inheritance, so after the parent's death this land is not part of the inheritance and daughters cannot claim a share. The law states that a landowner can bequeath their individual property to anyone via testament (Heath and Tan, 2020; Mookerjee, 2019), but this is not a common practice in Katuyanur.

Katuyanur's villagers, irrespective of gender, landownership, and caste, refer to five reasons why daughters should not inherit arable land. The first reason is that *daughters receive marriage gifts instead of their inheritance share in land*. These marriage gifts, often comprising golden jewellery, are provided by her parents and considered an early inheritance; relinquishing daughters' rights to inherit land after

parents pass away. Kumar directly related marriage gifts, or dowry, with early inheritance, saying the reason his sister did not get a share of their father's land was because "with giving dowry the inheritance is balanced." Saravanan did not equate marriage gifts to inheritance, but argued daughters cannot receive gold as well as land:

Now, when girls get married, they ask for 10 *pavan*, 20 *pavan* [gold]. We give that, we go through the trouble. Then we cannot again give her something. So only the son gets land.

The jewellery daughters receive as marriage gifts from parents are thus compared to land given to sons. Not only parents and sons make this comparison, but so do the daughters themselves. This resonates with the findings by Dube (1997) and Khan (2000), that a daughter's wedding expenses, including dowry, are considered a substitute for their inheritance of any property.

Sometimes brothers buy their sisters' inheritance share at the time of dividing the land. In exchange for a payment, women sign an official document waiving their rights to a share of the land in favour of their brothers. Vijay's only sister died more than 20 years ago, but Vijay argues that if he still had a sister, he would not have given her a share of their mothers' land if she would ask for it, but "I will give something. I will not give land; I will give money." An elderly MBC farmer recollected his father had given his sister 10 *pavan* gold when she married, but at the time of dividing their mother's land, his sister filed a complaint with the police, claiming a share of that land. The farmer gave his sister another 10 *pavan* gold, and she dropped her complaint. The farmer thus was of the opinion his sister did not have a right to their mother's land as their father had given her golden jewellery, so the sister had to file a complaint with the police to force her brother's hand to buy her share. As with marriage gifts, this payment represents the value of women's inheritance share in the land. Buying inheritance shares to land similarly happens between brothers. Apsana's parents-in-law owned only one housing plot, too small for houses for both their sons. The brother-in-law therefore did not get a share of this housing plot but settled with his wife in another part of the ST hamlet. The brother-in-law did not ask for money as compensation for his lost inheritance, but Apsana and her husband anyway plan to give him money. They fear if they do not, one day the brother-in-law's sons will come and ask for a share of their ancestral land. To prevent such a scenario, they give the brother-in-law money as a compensation for his lost share and Apsana and her husband can exclude future generations from claiming the land. Buying siblings' inheritance shares in land is common, and not only sisters' shares are bought. However, sisters must insist on being compensated and if bargaining with brothers does not result in a financial compensation, they can file a police complaint, or threaten to do so, as Agarwal (1994) had rightly included support from the State as one of the factors that increases fall-back position and consequently bargaining power.

When daughters' rights to inheritance in landed property are revoked because they received wedding gifts or a payment, no valuation of the landed property took place beforehand. The comparison between the value of land and wedding gifts is a social construct that represents the value of a woman's

rights rather than the market value of her inheritance in landed property. It can be argued that comparing wedding gifts and payments to land inheritance recognises daughters' entitlement to a share of the land. This entitlement just does not necessarily encompass a share of the actual land but could be a share of the value of the land. Simultaneously, this entitlement does not legitimise daughters to stand up for their rights to inherit landed property and make a land claim. Kumar remembered when he and his brother divided their father's land among themselves without involving their sister, she approached them and asked why they divided the land without her consent. Kumar admitted they should have involved her in the decision but added that his sister did not object to the fact she had not received a share because she understood her brothers had spent a great deal of money on her. While Kumar acknowledged his sister should have been a part of the decision on how to divide their father's land, he simultaneously expected her to give up her share. In his point of view, waiving her inheritance right was the only choice his sister could make.

The wedding gifts a woman receives as replacement for land could be considered the outcome of a bargaining process between a woman and her parents, would it not that wedding gift demands are made by the prospective family-in-law rather than the woman herself. Ambika explained that when a girl gets married, the family-in-law requires her parents to buy her a golden ring or necklace and a golden *thali*. Even if parents give land as a marriage gift, the family-in-law will ask for gold jewellery and parents cannot afford both. It is a bargain nevertheless, because if the demands made by the parents of the groom are too high, or the offer proposed by the bride's parents too low, the marriage negotiations will cease, and no marriage will take place between these families. The future bride may ask her parents for golden jewellery, but she is not consulted in the marriage negotiations; this is her parents' responsibility. Such a bargain about marriage gifts thus involves three parties; a girl, her parents, and her future family-in-law, in which the family-in-law has the most advantageous bargaining position and the girl the least. Bargaining about marriage gifts does not always take place; with close-kin marriages bargaining is unlikely and whatever the bride's parents can afford will be accepted. But even within such close-kin marriages, landed property is rarely part of a bride's wedding gifts.

In a bargain between a woman and her brother(s) over dividing inherited property, assuming all parties prefer a share of land rather than its value in money, the brothers' relative bargaining power is stronger since the brothers end up with the land. This assumption of women preferring land over money, however, is ambiguous. Vijay was convinced women are not interested in land but make a claim to land so brothers give them money or gold. Ambika argued women do not benefit from owning land as much as they benefit from gold:

If they [women] have gold, that is better. Now if I got half *pavan* earrings from my mother, that half *pavan* is what my husband can get if there are expenses. If we struggle, that is all I can give. Other than that, I cannot give anything. If a girl has a lot of gold, that is useful for the husband. (...) If I have land here, and my daughter is somewhere far away and given

this land, she cannot cultivate the land. If she is here, she can look after the land, if she is far away, she cannot come here and look after it. That is why girls do not feel land is important, but gold is important. If I am not in good health, or if my husband is not in good health, or if a child is not in good health, if we urgently need money, we can use the gold. We give it [gold] to the bank, and when we have money, we can buy it back. With land, you cannot do that.

Women's preference for money over land could thus be understood in light of the ease of (temporarily) liquidating gold compared to land. By using her rights to inheritance in landed property, a woman can increase her bargaining position until she and her brothers agree upon a sum to compensate for her loss of land. Simultaneously, women's choice between land and gold or money is never free of social judgement and thus establishing women's preferences isolated from these social judgements is difficult.

As Ambika's argument above already suggests, daughters move to a husband's home after marriage, and *patrilocal residence makes it difficult for daughters to manage the land after marriage*, which is the second reason why daughters should not inherit land. The various castes in Katuyanur always practice patrilocal residence. A girl's relocation to her husbands' home after the wedding is why villagers, including women, say daughters do not benefit from inheriting land. Living away from the natal home, women will find it difficult to look after land inherited from their parents. Sons, on the other hand, are expected to stay in the natal home for their entire life, and thus will remain near the land. Not every informant agreed with this; some said if a woman can benefit from land, she will find a way to manage it, either in person or through labourers. Pandi's aunts inherited a share of their father's arable land, as mentioned earlier, but since they do not live in Katuyanur, they make money from the land by renting it out. Patrilocal residence is thus not a satisfying reason for daughters not needing to inherit land.

Furthermore, patrilocal residence does not prescribe village endogamy or exogamy. In fact, among the Malayali in Katuyanur, both are practised. Seven of the married women within the informants' households were born in Katuyanur, one of whom an MBC woman and the others Malayali, while 19 married women of various castes were born in a different village. Among the latter, eight were born in a village less than 10km from Katuyanur. Within those same households, one Malayali daughter got married in Katuyanur, while nine daughters moved to another village after marriage, three of whom to a village less than 10km from Katuyanur. It is thus more common for marriages to be arranged between households from different villages, but there are still several women, mostly Malayali, who marry within their natal village. The difference between castes may be due to the fact that the BC and MBC households do not have a sub-caste network within Katuyanur to whom they can marry their daughters. Marriages arranged between households within the same village do not affect inheritance practice, as none of the women who married within or close to Katuyanur, who could theoretically cultivate the land in person, received any share of land from their parents.

The third reason why daughters should not inherit land is that after marriage *daughters become the responsibility of, and responsible for, her husband and parents-in-law*. Landed property is not always passed on to children only after the death of both parents. When parents age and sons establish their own households, land is divided among the children, usually only sons, as an early inheritance. Dube (1997) had identified three common moments at which a joint family breaks up and sons establish their own households in separate homes. First, when multiple sons are married and establish independent households, second, when the father of married sons dies, and third, at a much later stage when one of the married brothers heads the household (Dube, 1997). This aspect of breaking up joint family property will be discussed in-depth in Chapter 7. Part of the deal when children obtain a share of property is that they will take care of their elderly parents. However, anything a daughter earns after marriage, she is expected to contribute to her own household, including her parents-in-law. This expectation also entails that sons should take sole care of the parents, which they can do better if they receive all the arable land. A Malayali farmer laughed when she explained why daughters should not inherit land:

He [her son] will do everything. We have the land but also the debt, we are struggling a lot, we only have the land. The girls we gave away for marriage, will they repay the loan? They will not.

Ambika stated parents cannot expect anything from a married daughter, even when they are in need, because that means asking money from the son-in-law, something they should never do. Daughters' membership to the natal household is only temporary and the parents-daughter relationship transforms after the daughter marries. Sarada explained sons take care of parents if they fall sick and are responsible to arrange the funeral rites. If Sarada visits her daughter's home, her daughter looks after her for 10 or 15 days, but after that her son-in-law will say it is time for her to go back home. Santhi similarly explained that daughters cannot look after their parents because the parents-in-law and husband will say 'you are married here so you have to take care of us, not your parents.' She added that if her family-in-law would have allowed it, she would have taken care of her parents. Thus, even if a daughter wants to support her parents, her husband and parents-in-law will not allow it. If landownership indeed increases a woman's bargaining position, as argued in the literature, landownership would mean a woman has more power to decide to support her parents. Now parents decide for her, as denying daughters a share of the family's arable land deprives daughters of a position to bargain with her family-in-law on supporting her parents, thus creating a self-fulfilling assumption. The role of land in intra-household decision-making on income allocation will be discussed in Chapter 8.

Women's responsibility to her husband and parents-in-law as a reason for daughters not to inherit land is closely connected to the Tamil kinship system. Sarada explained daughters belong to their husbands' homes after marriage:

I have two daughters. They ask me, why am I not getting any land? (...) They ask, give some land, otherwise give money. Like that they ask. What can we do? We gave you to another home.

As discussed in section 3.2, descent within Tamil kinship is characterised by patrilineality. Tamil kinship is a complex system but here it is important to remind that marriages take place endogamous within *jati* or even kin-groups, but exogamous of lineage. Girls move away from their natal home upon marriage and loose membership to the father's lineage in favour of gaining membership to her husband's lineage (Dube, 1997). Thus, if parents give daughters a share of their land, the property will transfer between lineages. Pandi explained this as followed:

The girl goes to a different house, the property then goes there too, therefore they think about the son and how he will eat. After the girl goes to her new home, they do not think about her. Our property will go there, it will go to the house of our family-in-law. This is my son. Land should go to my son.

This practice is in accordance with Tamil kinship systems, in which land should to stay within the patrilineage (Clark-Decès, 2014; Rengalakshmi *et al.*, 2006) and therefore daughters should not inherit land. Indeed, Clark-Decès (2014) found that one reason for a preference in close-kin marriage in Tamil Nadu is that it prevents families from having to share their property with 'outsiders'. This likewise explains why daughters who marry within or near their natal village, who could cultivate the land, do not receive any share of ancestral land either; daughters move to a household of a different lineage and should not take ancestral property with them. However, even women who married close-kin, for example the maternal uncle, did not inherit any land.

The fourth reason is that *women prioritise a good relationship with their brothers over land*. Khan (2000) argued that the changes in the HSAAs have put enormous stress on the relationship between brothers and sisters. However, the responsibility to alleviate this stress appears to lie with women. Women are expected to forego their inheritance of land to demonstrate they think and care about their brothers. Anita expressed a common feeling, saying "[women] do not want to fight, many give their signature. We [women] want everyone to be happy." Women give up their rights to inheritance in favour of brothers but expect brothers to take care of her in reciprocity. A middle-aged Malayali woman, a farmer whose parents owned arable land, rejected asking her brother for a share in their parents' land:

I have never thought that [to claim land as inheritance]. When I go there, they [my brother's family] take good care of me. That is enough. I do not want any land, I want nothing.

This concern for brothers, what seems like altruism, is thus part of a reciprocal relationship between brothers and sisters. Women are first looked after by parents, and brothers are expected to take over that caring role after their parents have passed away. If a brother neglects this duty, women have greater social legitimacy to claim a share of ancestral land and even to file a complaint if the brother does not comply.

A similar reciprocity between land claims and care takes place within other familial relationships. Sobia was only three months old when her father died. Her widowed mother remarried and moved away from the village, leaving Sobia behind in the care of Sobia's paternal uncle, which is expected with a patrilineal kinship system, as discussed in section 3.2. Sobia's uncle appropriated the land Sobia's father had owned since he had taken care of her, including covering Sobia's marriage expenses. Sobia was her father's only child, but her uncle took the land Sobia could have inherited as an exchange for having taken over the duties of her father. In another example of the exchange of land claims for care, Jaya's two sisters claimed a share of ancestral land which had gone to their brother. Their mother had been bedridden for eight months, and since the brother was elsewhere for work, the two sisters cared for her during this time. The sisters argued they should get a share of the ancestral land since they had taken care of their mother instead of their brother. In the end, the two sisters did not pursue their land claim because, Jaya added, they love their brother. Jaya's recollection not only illustrates that the child who received land from parents should care for the parents, and vice versa, but it also stresses that her sisters ultimately did what was right (choosing their brother over claiming their share in land). Anuja's father-in-law used his land to make sure at least one of his sons would take care of him in old age. He divided his land among his sons but kept 0.5 acres for himself as security; the son who will take care of him until his death will get that share. Land is thus both an insurance for elderly parents to be taken care of, as well as a compensation for care provided.

Women who pursue a claim to land end up in a damaged relationship with their brothers. None of the women I spoke with whom were born in a landowning family wanted to pursue their rights to inheritance in landed property because they did not want to damage their relationship with their brother(s). This finding is not specific to Katuyanur, but more general to India, as Agarwal (1994) and Dube (1997) also observed that women who claim a share of inheritance in property risk their relationship with their brothers. Owning land may offer women several benefits but women also rely on a relationship with brothers. Santhi stressed that a good relationship with brothers is more important than owning land because the land may go, but the relationship is important until death. If we consider this relationship between brothers and sisters as one of cooperative conflict through bargaining, women's fall-back position is less advantageous compared to men; women give up land for their relationship, but men give up their relationship for land. Women's greater dependence on a relationship with brothers results from the Tamil kinship system in which brothers play a crucial symbolic role in ceremonies for her daughters at the time of daughters' coming-of-age and marriage. In accordance with what Clark-Decès (2014) writes about kinship relations in Tamil Nadu, a woman's brother has a most honorific status, who also makes the

greatest contribution to her daughter's coming-of-age gifts and marriage gifts. A brother's home is furthermore a place of refuge if a woman's marriage does not work out, thus playing a role in her fall-back position. However, parents emphasise married daughters belong to the conjugal home; she can come and visit for a few days and get everything she needs, but then she needs to go back to her husband's home. So, the ability of women to depend on her brother's support as fall-back position in case of a failed marriage is questionable. Women thus do not prioritise relationships with brothers over inheriting land out of altruism, but as a result of a kinship system in which a woman depends on a relationship with her brother. A woman's decision not to initiate a bargain because she anticipates an undesirable reaction from her brother is what Lukes (1974, in Kabeer, 1997) refers to as non-decision-making, which sustains existing power relations.

The fifth reason is that *landowners do not own enough land* to give daughters a share of ancestral land. Katuayanur, and India overall as seen in section 3.4, is characterised by a high proportion of marginal and small agricultural landholdings. If these farms are split among two or more children, each child would struggle to maintain their households with farming, thus increasing the need to diversify livelihoods. This strategy of livelihood diversification will be discussed in detail later, in Chapter 7. For the moment, it suffices to argue that intergenerational land fragmentation is a serious issue threatening agricultural livelihoods. However, instead of arguing that daughters inheriting land threatens sons' livelihoods, practising equal inheritance also implies a daughter-in-law can bring land into a household. Land fragmentation remains an issue as the land owned by a daughter-in-law would not likely be adjacent to the land a son will inherit. However, informants do not mention the practical issues related to land fragmentation but argue that it is unfair for sons. A daughter will get land through her husband after marriage, and if she receives land from her parents too, she has land from both sides, which would be unfair. This is a weak argument, as the bundle of rights a woman has over her husband's land and the bundle of rights she would have over land owned by herself are very different, which I will discuss elaborately in Chapter 8. Parents consider how many landed properties children have access to, but not the rights they have in those properties. Other evidence that refutes this argument is that daughters of landowners who marry into a landless household, like Jaya and Apsana, do not receive a share of arable land from parents either.

These five reasons why daughters should not inherit land show that exchange entitlements in the extended entitlement approach are only theoretical possibilities; inheritance rights can lead to landownership, but other factors play an important role in realising the endowment of landownership. As several social actors are interested in inheriting the land, bargaining needs to take place over who will obtain the endowment not just in theory, but in practice. As this study identified five reasons why daughters should not inherit land, daughters who do want to inherit part of their parents' land need to bargain for their share within each of these five reasons. This shows that a bargain over land inheritance is

a complex web of multiple bargains; one for each of the obstacles women face in their inheritance of landed property.



The five reasons why daughters should not inherit land, as discussed above, make bargaining about the inheritance of landed property between brothers and sisters uncommon. Sons need not ask to inherit landed property; they automatically get it. Any initiative to bargain about the division of inherited land between brothers and sisters is always with the sisters. However, sisters anticipate their bargaining position is disadvantageous compared to their brothers' bargaining position, which is an important reason for women not to initiate a bargain over inheritance of land. Prema's father had wanted Prema to receive a share of his land, but her brother dismissed this:

My father gave me land, but my brother is not willing to give it. Let it be, let it be in his name instead of mine, let it be, like that I thought. The *patta* is in his possession. In my brother's. My father wanted to give me land, but he died, and my brother did not give it. He [my brother] needs to sign for it.

Prema thus chooses not to confront her brother about their father's wishes for the inheritance of his land. Ambika thinks that if she had received land from her parents, she would have had something that is just hers. She sees working on her husband's land as a reciprocity for what he does for the household than as investing labour in her own land: "my husband has the difficulty of working outside, for us, for us to eat, for us to do well, therefore he struggles. In his land I work hard, like that." She explained that although she considers her husband's land as her land as well, it is land he received from his parents, which differs from land given to her by her own parents. However, she added that there is no point to think about receiving land from her parents, since that will never happen. Although their examples are different, Prema and Ambika both choose not to initiate a bargain about a share in ancestral land, as they know they will not be given any land. They expect a negative bargaining outcome for themselves and thus do not initiate a bargain as this may damage relationships, which will only deteriorate their fall-back position. Sons' normative inheritance of land entails that men do not need to fight for their rights to inherit in landed property, only when their rights are challenged. Women's rights to inherit do not get challenged; they are systematically violated, and women must challenge the violation of their rights to inherit landed property.

While Hindu women have rights to inherit a share of their father's individual property and joint family property, in practice they rarely inherit any land. This shows what Peluso and Ribot (2020) already argued; that "rights may be guaranteed but they are not always accessible" (2020, p.302). The five reasons why daughters should not inherit land, as discussed above, act as barriers resulting in inaccessible or difficult to access inheritance rights for women. Women are generally aware that the HSAA, 2005 guarantees them a share of parental land as inheritance if they file a police complaint. While

lack of time and money and the effort required to go through the entire process following such a complaint deters women from undertaking steps to exercise their rights to inheritance in landed property, there is a more important reason for women refraining from doing so. This reason relates to the social scrutiny that follows if a woman files a complaint. Women who insist on their rights to inheritance in landed property are referred to as troublemakers. Apsana did not exercise her rights to receive a share of her parents' land and considers women who do to be in the wrong:

Every time a girl says she wants her share she causes problems, file a case. (...) I think that is wrong. If her brothers take care of the land, there is no problem. A girl will spend money, file a case, they [the brother and sister] will no longer speak with each other.

Thus, instead of being socially supported, women who claim what is lawfully theirs are considered as causing problems. Men who deny sisters their rights to inheritance in landed property are never reprimanded by the community in the same way women who insist on their rights are. The social pressure on women to waive their rights to inheritance in landed property is strong and influences women's claims over ancestral land. This implies that any bargain over the inheritance of land is never only between siblings but is rooted in the community's beliefs and perceptions of legitimacy.

Inheritance practices systematically result in unequal landownership between men and women. These practices, embedded in Tamil kinship and patrilineal descent, are equally strong in situations where the five discussed reasons are irrelevant, for example daughters who marry within their natal village. While most villagers with whom I spoke do not consider the law on equal inheritance wrong, their view on inheritance is not from the perspective of the law on land inheritance in general, but a specific perspective on their landed property, for which they prefer inheritance by sons. Women's rights to inherit landed property are recognised, but social norms expect women to waive these rights in favour of brothers. The community accepts women asking for a payment in exchange for giving up a claim but insisting on inheriting land is not accepted. Here the contrasting notions between two of Benda-Beckmann, Benda-Beckmann and Wiber's (2006) four 'layers of social organisation', i.e. ideological, legal institutional, social relational, and quotidian practice, becomes apparent. At the legal institutional layer, The Hindu Succession (Amendment) Act, 2005 treats property as a general object embedded in general property relations in which gender equality is stressed, while at the socio-relational layer, concrete property relations show that women are expected to forego their inheritance to a specific landed property in favour of their brothers. Both layers are arguable guided by the ideological layer, albeit this ideological layer differs among the two; the first is based on equality among all citizens, while the second is based on descent through the patriliney. While obtaining land endowments through inheritance is in theory equally accessible to sons and daughters, several social factors make actual opportunities to obtain landownership highly gendered. While the extended entitlement approach can reveal the entire set of exchange entitlements that can theoretically result in obtaining land endowments, the bargaining approach has to be added to understand

how these land endowments are distributed in practice. Relative bargaining positions of brothers and sisters play a role in this distribution, as bargaining is riskier for women compared to men. This is a perfect example of what Kandiyoti (1988) termed a patriarchal bargain; a bargain in which women have something to lose that men do not. A negative bargaining outcome for women does more damage to a woman's fall-back position, as she ends up without land *and* without her brother's support, compared to a negative bargaining outcome for men, as he only ends up with a decreased size of land. Bargaining power depends on fall-back position, but what may be lost regardless of bargaining outcome greatly influences a decision on whether to initiate a bargain. The apparent absence of bargaining between sisters and brothers over the inheritance of land only emphasises the structural gender inequality as women's non-decision-making enforces brothers' dominant status and terminates any bargain before it even begins.

5.4 Access to Land without Ownership

The earlier sections only discussed access to land in terms of ownership. However, landownership is not the only arrangement through which social units can access land. In fact, many societies do not consider property only as individual, private, and exclusive ownership, but consider a variety of notions of property (Turner, 2017). A holistic approach to property relations should therefore combine an extended entitlement approach with a bundle of rights metaphor to understand not only the mechanisms at play in obtaining access to land, but also to understand what bundle of rights is derived from this access, as different bundles are open to different social actors. In Katuyanur I found various types of access to land, each for different social units and associated with a different bundle of rights. These bundles of rights derived from access to land transcended the categories of private property and state-owned property, two of the 'Big Four' property types. Based on these findings, I argue two things. First, categorising property types into the 'Big Four' obscures the diversity of bundles of rights existing within each category. Second, the various bundles of rights that can be derived from access to land by different social actors facilitate bargaining over access to land and over rights derived from this access. I discuss the bundles of rights derived from access to land in reference to the five categories identified by Schlager and Ostrom (1992); entry, withdrawal, management, exclusion, and alienation. I demonstrate here that 'fuzzy' property relations, i.e., the various bundles of rights derived from landed property in which control over the endowment and control over the entitlement can be held by different social actors, is the main reason why multiple bundles of rights can be derived from single demarcated properties, and thus benefit multiple (groups of) people.

However, in this discussion not only the bundle of rights derived from access to land is important, but so are the mechanisms through which this access was gained in the first place. In a similar fashion to the previous sections, the extended entitlement approach will be used to gain an understanding on how access to land is obtained. This is necessary to understand which social actors can or cannot gain access to land and consequently can or cannot obtain a bundle of rights derived from this access. In section 2.3,

several mechanisms through which social units can gain access to land were identified. These mechanisms included exchange, membership, intra-family transfers, intra-community access, land markets, land reform, and labour and capital investment.

5.4.1 Access to Poramboke Land

Poramboke land is government land, or state-owned property, currently without a purpose. Villagers can receive permission from the local VAO to use *poramboke* land, for cultivation, housing, or grazing of livestock, but the government may ask the user to vacate the land at any point in time. For some *poramboke* lands the government has a future purpose in mind, such as road or railway expansions, while for other *poramboke* lands there is no purpose in the foreseeable future. In the ST hamlet a small area of *poramboke* land contains 4 houses, built with permission from the VAO. All the *poramboke* land is occupied; there is no land left to construct additional houses. When a household has been living on a specific plot of *poramboke* land for a long time, it is possible to request *patta* for that land, and if granted the *poramboke* land becomes *patta* land. One informant, who built his home on *poramboke* land, explained that once a year, locals can raise issues during the *Gram Sabha*, a meeting of the local governance body attended by the electorate, the VAO, and the *Tahsildar*. Villagers can bargain with the electorate and the local governing authority present at the *Gram Sabha* to transform their access to this *poramboke* land into landownership. This informant attended the *Gram Sabha* meeting several times to request *patta* for his home and for the other homes on the *poramboke* land. So far, he has been unsuccessful in receiving *patta*. *Patta* is important for these households because of tenure security and because without *patta* they do not qualify for the government's Housing-For-All scheme. Originally, *poramboke* lands were public lands or pastures over which communities paid no taxes. Today, villagers authorised to live on *poramboke* land pay housing taxes. Their payment of taxes functions as exchange entitlement, so even though these households do not own their housing plot, paying taxes entitles them to a bundle of rights that includes entry, withdrawal, management, and exclusion. These rights have restrictions, and the government can revoke these rights at any point in time without any form of compensation. Access to *poramboke* land is granted to a specific individual who gained this access by paying taxes as exchange entitlement. As the bundle of rights derived from this access does not include the right of alienation, bargaining with the owner, the State, is initiated in an attempt to expand the bundle of rights to gain full ownership over the land that would include the right to alienate the land.

A few villagers use *poramboke* land for agriculture. These villagers are farmers whose arable lands borders a small area of *poramboke* land. Among the informants, only Vijay's household cultivates a small area of *poramboke* land (0.25 acres). This *poramboke* land is small and located between the arable land he owns and the unpaved road along the border of the forest. Therefore, Vijay thinks it unlikely that the government will reclaim this *poramboke* land for government use. *Poramboke* lands never have irrigation facilities, thus farmers' ability to cultivate *poramboke* land depends on whether water from their own

irrigation facilities can reach the *poramboke* land. Farmers who cultivate *poramboke* land do not have the right to exclude others from using it, but the size of the land and the lack of water means it is not useful to anyone whose own land does not border the *poramboke* land. Vijay can, however, exclude others from harvesting the crops he cultivated on *poramboke* land because Vijay invested the time, labour, and money that resulted in the crops. In other words, the access mechanism Vijay used is to invest labour and capital. This embodies an entitlement relation in which invested time, labour, and money represent the endowment that entitles Vijay to the crops. Vijay does not pay taxes for the *poramboke* land, and therefore his right to entry, withdraw, and manage the land is not based on rights derived from paying taxes, but the result of absence of competition over that land among villagers, the result of his investments in the cultivation, and neglect of the land by the government. The extended entitlement approach is thus useful in identifying the various exchange entitlements available to obtain access to land, as this section has shown that access to *poramboke* land can be obtained through various mechanisms, e.g., paying taxes and investing labour and money, and still result in an identical bundle of rights. However, it also shows that an apparent identical bundle of rights may in fact not be identical; as the right to exclude others is stronger in the first example, where there is State support, than in the latter. Furthermore, different exchange entitlements may require different bargains, even between different social units; the State in the first example, and other villagers in the second. Understanding these differences are important as they explain why different opportunities are available to different people.

5.4.2 Access to Forests

The reserved forest surrounding Katuyanur is another state-owned natural resource. Although access to forests is regulated by the government's Forest Department, the introduction of the Forest Rights Act, 2006 (FRA) makes it possible for tribal and forest-dwelling communities to apply for specific forest rights. The FRA was not implemented in Tamil Nadu until 2017, but since then Katuyanur has formed a Forest Rights Committee (FRC) under the Act. Katuyanur's FRC has 15 executive members and has applied for various entry and withdrawal rights to the Katuyanur Reserved Forest. So far, they gained a government bus-service running through a restricted area of the forest, connecting Katuyanur directly with Salem, and they secured a permanent tenure contract for the many tamarind trees in the forest. This contract entails that local ST people can sign up to collect the tamarind, for which the Forest Department pays men and women Rs.200 a day in wages, and each year's tamarind yield is distributed among the local ST households. The FRC applied for community rights to a forest pond, which two non-ST farmers now exploit, and for rights to use the forest for pastoralism, but they are still waiting for the results.

The bundle of rights that locals hold over the forest is limited to entry and withdrawal. Local BC and MBC villagers' access to the forest is not covered by the FRA, as access is through membership to the ST and other forest-dwelling communities, but Forest Rangers tolerate their entry and withdrawal based on their membership to the village as entry and withdrawal by non-locals are not tolerated. The right to

withdraw comes with restrictions for every villager; as per the FRA 2006, only withdrawing minor forest produce is allowed. This includes gathering fruits, herbs, tubers, honey, vegetables, and firewood, but excludes hunting, pastoralism, and tree felling. Pastoralism may be prohibited in the Reserved Forest, but herds of goats, cows, and bullocks do roam the forest. Offending pastoralists, if caught by Forest Rangers, are required to pay a fine of Rs.500 per cow and a smaller amount for goats. However, against a payment of a monthly fee of Rs.100 per goat or cow to the Forest Ranger, pastoralists can have their livestock grazing in the forest. Locals can collect branches that have fallen to the ground, but they cannot cut anything from trees and even carrying an *aruval* or any other knife into the forest is prohibited. If a Forest Ranger catches a villager carrying an *aruval* in the forest, the Forest Ranger confiscates the *aruval*. Minor forest produce has decreased in importance for livelihoods and subsistence. Reduced availability of minor forest produce is one reason, but also because collecting forest produce is time consuming and because villagers' needs have changed. A few decades ago, every home in Katuyanur was a thatched hut for which bamboo, cut in the forest, was used as primary construction material. Nowadays, houses are made from bricks and cement. The forest was not only a source for building materials but for fuel as well. Although each home in Katuyanur now has facilities to cook on gas, many women still collect firewood from the forest. Rani, Jaya, and Gayatri regularly went to the forest together to collect firewood. On such occasions I wanted to join them, but they refused to let me because of the forest's infestation with *unni*; tiny dark-brown fleas that bite into the skin to feed on blood, resulting in an irritation for days. Since fuel is important in food security, I will return to this aspect of withdrawal later in Chapter 7.

The Malayali community uses the forest not only for withdrawal of forest produce but also for religious purposes. One day in December 2018, I joined Sarada and two other women to visit a local temple in the forest. We walked along the road towards the bus stop and there we entered the forest. The forest was dry with small trees sparsely spaced and many bushes and shrub. We followed tracks leading deeper into the forest where tree density increased, and we could walk in the shade. After around 15 minutes we reached a large open space where cattle were grazing. Sarada explained that this area fills up with water in the rain season and becomes a forest lake in which they can catch fish. However, not just anyone can fish; the Forest Department offers a fishing contract to the highest bidder. She added that at this time of year there usually is water in the lake, but because of lack of rains the entire area was dry. Indeed, the Statistical Handbook of Salem District 2018-19 shows that the southwest monsoon (June 2018 until September 2018) saw 20% more rainfall than normal, while the northeast monsoon (October 2018 until December 2018) saw 43.3% less rainfall than normal. Overall, Salem district received 638.6mm rain in 2018-19, which is 38% below normal rainfall (Government of Tamil Nadu, 2019d). We crossed the riverbed leading to the dry lake and climbed up on the other side. After 30 metres we reached the temple, looking out over the dry lake. I had expected a temple building, but instead found a row of football-sized stones with one bigger stone at the centre in front of a steel gallows from which a bell hang. There were steel

spears stuck in the ground between the stones on which lemons were pierced. The three women prepared for the *puja* by lighting incense and camphor tablets. When they started their prayers Sarada signalled me to join by folding my hands. When the women completed the *puja*, we walked back to the village. We took a different route and instead of crossing the riverbed we continued alongside the riverbank into the forest. We came up to a small concrete dam where we crossed the dry river and not long after we returned to the road leading to Katuyanur. The bundle of rights associated with access to forests for religion is more difficult to identify. The bundle includes entry and to some extent management, as they can make some adjustments to the temple area, but here also the management right is only very limited.

Two temporary camps had set up in the village by tribal people who had come from villages in the hills to work for the Forest Department. In one camp, comprising three tents made from bamboo and blue plastic, three tribal families were living whose villages had no work and no facilities such as water. They had therefore left their village in search for work, and were now employed by the Forest Department, cutting bamboo to sell to a paper factory. Since they work for the Forest Department, Forest Rangers allow these families to stay in their temporary camps, but only during the time the Forest Department employs them. Their access is thus obtained as a result of exchange of labour for temporary living space. The Malayali women from the ST hamlet knew these people well since they regularly passed the camps on their way to the forest for firewood collection. Their camps are just inside the forest, but the farmers living nearby allow them to use their water facilities to get the water they need for cooking, drinking, and bathing. Their bundle of rights is thus temporal; only as long as they work for the Forest Department can they enter the forest, withdraw minor forest produce, and to a very limited extent manage the direct area of their camp although no permanent changes can be made, like building a permanent housing structure.

The social actors holding various bundles of rights over state-owned property include the government, the local FRC, local populations, and local SC and ST communities. The mechanisms through which access was gained included exchange, labour and capital investment, community membership, and village membership. The government has the greatest bundle of rights; the government can exclude villagers to use or live on *poramboke* land and the government can exclude villagers from entering the forest, the latter executed by the Forest Rangers. Villagers who have permission to live on *poramboke* land have management rights as they can build houses on the land and have the right to exclude others, but they cannot exclude the government. The local FRC can apply for greater entry and withdrawal rights for ST and SC communities, and they may have limited rights to exclude BC and MBC communities from use of forest resources, for example if the FRC obtains community rights to the forest pond. Here the importance of resource scarcity is also evident, as the ST community has no issue with BC and MBC households collecting firewood, but for the use of water from the forest pond the ST community wants to exclude BC and MBC households. Local populations hold a bundle of rights that includes entry and withdrawal, although these rights are insecure for BC and MBC communities as they are not covered by the FRA. No

social unit other than the government has the right to manage the forest; local communities cannot make any permanent changes to the environment. The bundles of rights held by social units over one property thus vary and are hierarchical. This shows that within one property category, i.e., state-owned property, various arrangements exist. Each arrangement includes different social units holding various bundles of rights. Considering state-owned property as one category thus indeed, as argued by Turner (2017), conflates a great variety in property-relations.

5.4.3 Access to Privately Owned Land

Privately owned land in Katuyanur similarly contains a variety of arrangements of access for multiple social units, with each social unit holding a specific bundle of rights. A common arrangement for access to land that comes with the smallest bundle of rights is *access to land to use as path*. Usually, this arrangement only includes the right of entry and denied access to enter a specific property does not affect a social unit since they can use a different path over property for which access is allowed. In some situations, however, denied access to land to use as path has considerable implications for livelihoods. Two landowning Malayali households do not have private access to their house and field but need to cross neighbouring land. While this is not an issue for walking to and from their home, it is an issue when they need to transport their harvest to the market or mill, as the heavy vehicles may destroy the crops grown on the land it needs to cross. These neighbouring landowners did not grant this access, which resulted in conflict, and without a long-term solution, these Malayali farmers may need to abandon their land if they cannot find a way to transport their harvest by vehicle. Kumar's father had anticipated such a problem of road access, so before dividing his land between Kumar and his brother, he used part of his land to construct a road leading to the other side of the property. Kumar's brother, who received the far side of the land, can now access his home and land using the new road instead of crossing Kumar's share of the land. This access to land to use as path is often an informal arrangement; a social unit who can access land to use as a path can have this access revoked at any time, although a dispute may be taken to an authority to settle. Since the landowner has a bundle of rights that includes exclusion, the landowner is in a better bargaining position to deny any other social unit access, even if only to use as a path. This type of access is thus not obtained through any of the common access mechanisms and can be obtained by anyone, even outsiders, as if these paths are open access. However, this rule of access is maintained by the landowner who can exclude anyone for any reason at any moment or can set rules on access: allowing entry on foot, but not by vehicle.

Another informal arrangement of access to land, with a larger bundle of rights, is *access to land for animal husbandry*. I will discuss the links between access to land and livestock later in section 7.1.4, but for here it suffices to say that not only households who own arable land keep livestock. Households without access to arable land can keep only a few animals, but farmers can give them permission to let animals graze in arable land during fallow periods. Such an arrangement thus not only includes the right of entry but also the right of withdrawal. However, the farmer who granted permission can restrict what can be

withdrawn and when or decide to retract the permission at any time. In this sense this form of access differs from the previous arrangement, as no prior permission was needed for access to land to use as path. Closely related to access to land for animal husbandry is *access to land for picking non-cultivated crops* such as leafy greens, flowers, herbs, or fruits for own use. In this arrangement social units have entry and withdrawal rights, although the conditions of withdrawal are different. This arrangement depends on a good relationship with the farmer, or as part of agricultural wage labour.

Access to land to use as path, access to land for animal husbandry, and access to land for picking non-cultivated crops are all three informal arrangements of access in which access is not an entitlement based on endowments. The bundle of rights is therefore also not an entitlement, but depends on a good relationship with the landowner, who has a greater bundle of rights, most importantly the right of exclusion. These three arrangements for access to land are not based on rights enforceable by an external authority when challenged. These three forms of access also demonstrate that there is little opportunity for bargaining as there is no cooperation between the landowner and the social actor seeking access. The landowner does not lose or gain anything when permitting or denying access, other than perhaps the relationship if it results in conflict. Access can be withdrawn or suspended, for example for use as path or grazing of livestock. An analysis of access to land using the entitlement approach and bundle of rights easily overlooks this temporality of access. Not only can access be temporal, but conditional as well. Even within separate rights, like entry or withdrawal, there can be limitations on these rights and thus not every entry or withdrawal right is identical; there are hierarchies, conditions, and restrictions that have important implications on what can be obtained through these rights.

The arrangements for access to private property discussed so far do not include the right of management. An important aspect of managing privately owned arable land is cultivation. Various arrangements exist where a cultivator is not the owner of the cultivated land. Cultivating land without ownership was common among my informants' households. In addition, data from the household survey demonstrates that among the 51 cultivating households, 19 households cultivate land owned by someone who is not a household member. Arrangements for *access to land for cultivation* come in various forms, including renting, leasing, or sharecropping land, which would be access to land through exchange. Sharecropping does not occur in the area, which is not surprising, as Gough (1982) observed that fixed-rent tenure has overtaken sharecropping in many parts of Southeast India. Renting or leasing land is slightly more common, although at the time of my fieldwork, none of my informants' households had given or taken any arable land for lease or rent, nor had any of the 103 surveyed households. Renting or leasing land can be a verbal agreement between social units, or a formal registration at the local VAO office by drawing up a tenancy document. The availability of arable land for rent or lease is scarce because landowners fear a tenant will use the document signed at the VAO office to refuse to leave the land. Besides landowners' reluctance to offer arable land for rent or lease, villagers also lack the capital to pay rent in

addition to the required investments for cultivation. For 10 consecutive years, one middle-aged MBC farmer rented 1 acre of arable land for Rs.10 000 per year. Three or four years ago he gave that up because he was not earning any income from the rented land. He invested Rs.1 *lakh* per year, Rs.40 000 of which was for labourers' wages, but he could not equal that amount in income, so he stopped renting the land. Thus, lack of capital combined with low agricultural incomes make renting or leasing land an unattractive venture. Land given for lease or rent results in two parties with a bundle of rights over the same property. The owner transfers the rights of entry, withdraw, management, and exclusion to a tenant for a specific period, albeit with restrictions. The temporary transfer of these four rights does not mean the tenant has unlimited freedom within these rights; cultivated produce can be withdrawn from the land, but the withdrawal of soil or trees planted before the tenancy period, for example, are usually excluded from the tenant's withdrawal rights. Thus, here again specific rights within a bundle of rights can be temporal and conditional and the rights are obtained through exchange entitlements. The exchange entitlement involved in access to land through renting or leasing is a financial transaction, while the exchange entitlement involved in sharecropping is a payment in kind. Bargaining may take place between the landowner and the tenant on the conditions of the exchange, e.g., the amount of rent to be paid or the share of the crop to be handed over. If bargaining over the conditions does not lead to a satisfactory outcome for both parties, cooperation may cease, as with the example of the MBC farmer who stopped renting the land as it was too expensive.

Another common arrangement of access to land for cultivation is an unregistered division of arable land as early inheritance among children, particularly sons. This form of obtaining access thus takes place through intra-family transfer. Among my informants' 20 households, this was the case for five households. As discussed earlier, only the daughters in Pandi's family had received a share of ancestral land, in all other households the land had been divided among sons only. A land division as early inheritance could be considered a form of non-cooperation, in which each son within the home gets assigned an individual section of the ancestral land. This moment of division is often when sons are married and have their own families to take care of. Vijay and his three brothers cultivated their land cooperatively, as one unit, until their children started college and the financial needs and preferences among the brothers diverged. Their different needs motivated the brothers to divide the land into four landholdings. Their elderly mother, Pushpa, continues to be the landowner of the whole property, but the four brothers consider the land they each control as their own respective properties. It is not unusual that an early, albeit unregistered, inheritance of land is considered a transfer of ownership. Even before land division, sons feel entitled to the land. Anuja's father-in-law divided his land among four sons and himself without registering the ownership transfer. Not long before the division, however, he needed money and sold the topsoil of his land to a brick company for Rs.1.5 *lakh*. His sons now oppose this decision to sell the soil and want their father to give money instead of the land since he sold 'their' soil. The brothers argue that the land has

become useless for agriculture because of the sold topsoil. Anuja stated this is not technically true, they can still cultivate, but the sons hold a grudge against their father for not sharing the money he made from selling the soil. Thus, even though the land was, and still is, owned by Anuja's father-in-law, his sons feel entitled to the earnings made from the land.

Access to land as an early inheritance, or even prospected inheritance, thus assumes a bundle of rights containing all rights except alienation. In the example of Anuja's father-in-law, bargaining between the sons and their father took place over who has which bundle of rights, particularly over the rights of withdrawal and management. Such an unregistered division of arable land as early inheritance also illustrates that two social actors can have the same rights over the same land, but these rights are not necessarily equal. Sons who received land as early inheritance have the right to exclude others from that land, but the father's right to exclude others is greater, as the father can exclude his son access to the land but not vice versa. Compared to the sons, the father has a greater bundle of rights for two reasons; first, the father's bundle of rights includes the right of alienation. Second, the father's exclusion rights are greater than the sons' exclusion rights as the sons' exclusions right are restricted to everyone *except* their father. Thus, a bundle of rights is useful to understand the differences in access between social actors who share an interest in a specific property, but easily overlooks the fact that even within specific rights there are hierarchies as some social actors may have an unrestricted right, for example an unrestricted right to withdraw, while other social actors may have the same right, but with restrictions or conditions.

A third arrangement of access to arable land, one closely related to the previous arrangement, is when a landowner is deceased and the land is divided among those who will inherit a share, but the ownership transfer is not registered. Households who delay the transfer of ownership do not have a specific reason for this; they simply have not come around to it and it does not impact the day-to-day farming business. Households also mention lack of money for the change of the name on the patta, although legally the heirs only need to pay a small fee to obtain the required documents from the VAO. As only the landowner has the right of alienation, in these arrangements of access to arable land no one can alienate the land. At least not until ownership is legally transferred to the descendants of the deceased landowner. The social actors controlling the land until then, have a bundle of rights that includes entry, withdrawal, management, and exclusion, but not alienation. In such a situation, bargaining over each heir's bundle of rights cannot take place between the heir and the landowner, but only between the heirs. Although, as previous sections showed, women heirs are often excluded from these bargains.

Finally, there are arrangements of access to arable land through relatives. Although access to arable land through relatives could be accompanied by a transfer of *patta*, this is not always the case. The terms of access to arable land through relatives without a transfer of *patta* can be unclear or insecure, with the possibility of access being withdrawn or restricted at any time without notice. Gayatri separated from her alcoholic husband and her mother-in-law granted Gayatri access to 2 acres of her land for cultivation.

After the death of her mother-in-law, however, Gayatri's husband tried to obstruct her access to the land and claimed the land and its produce. During my first field visit, Gayatri cultivated her mother-in-law's land and her two sons helped to maintain Gayatri's access by arguing with their father. When I returned for my second field visit seven months later, Gayatri could no longer use the land as her husband violently denied her access. Occasionally, when Gayatri knows her husband is away from the village for a few days, she goes to the land and collects items such as bamboo to use as firewood, but when he is in the village, she avoids even going near the land. Before Gayatri lost access to the land, her sisters-in-law claimed a share of their mother's land. They did not ask for the land itself but wanted Gayatri to compensate them by paying them Rs. 1-2 *lakh*. Gayatri's sisters-in-law did not challenge Gayatri's access to the land, as her husband later did, but instead acknowledged the legitimacy of Gayatri's access by claiming monetary compensation for their lost share of the land. Gayatri's access to land resulted from her marital status, as she was granted access to land her sons would eventually inherit, but Gayatri stated the access had nothing to do with her decision not to get a divorce. Access to land through relatives without a transfer of ownership is an insecure arrangement as the access can be revoked at any time. As with Gayatri, when the person who granted access passes away, a dispute over access is likely to occur among multiple social actors. As Gayatri never received ownership over the 2 acres, her bargaining position for access to the land was weak. Gayatri's access to land depended first on the support of her mother-in-law, and later on her sons' support to fight for continued access. Gayatri could not maintain her access to the land because her husband's legal status as coparcenary strengthened his bargaining position. In this arrangement of access to arable land, social actors' relative bargaining positions depend on their legal status as coparcenary, which provides the right to exclude others' access.

The access mechanism is thus crucial in a social actor's ability to continue their access, as a financial transfer as exchange entitlement results in relatively secure access, like in the examples of paying taxes or renting a property, while informal verbal agreements are insecure, for example with the access to land to use as path or in Gayatri's example, and access through membership, as in the access to forests or access to land as heir, are again more secure as there is social support for the continued access. The various types of access to land discussed here thus contain a great variety of bundles of rights where different types of land can contain the same bundles of rights for different groups or individuals and different bundles of rights can be derived from a specific type of property. Private property as one of the 'Big Four' property types, the others being open access, common property, and state property, thus conflates a great variety of property arrangements and connections between various social actors, as Turner (2017) had already argued. Bargaining over access to land between households occasionally occurs, as the examples of Gayatri and Anuja illustrate. The bundle of rights bargained about varies according to the situation and is not always about ownership. Bargains, or conflicts, between neighbours can involve entry rights to land owned by a neighbour, such as using a neighbour's field as a path, or the right of withdrawal, for example letting

livestock graze in a neighbour's field. Since landowners have the right to exclude others from their land, a right supported by the legal system, any social unit with access to land without ownership, or a formal arrangement such as a rent or lease contract, is in a less advantageous bargaining position over a particular property compared to the owner. However, bargaining positions of social units among whom none is the owner depend on factors such as membership, exchange, gender, social support, and their total bundle of rights.

5.5 Conclusion

Land is more than an asset to be exposed of when it no longer proves useful or profitable, unlike other material possessions. Land embodies relationships between people, bears the identity, activities, events, and hard work of ancestors, is the source of deep-rooted memories, and the stem of past, present, and future generations. Land is thus intertwined with meanings, perceptions, and connections between people and between people and properties. The connection people experience to land is not gendered, but this connection is socially deemed more important for men than for women. Women's ignored rights to inheritance in landed property suggest a rejection of women's belonging to ancestral land. The *exclusive* notion of property as taken by the Government of Tamil Nadu, which focusses on individual property rights, thus clashes with the *inclusive* notion of property as understood by local communities, which focuses on the embeddedness of land in social networks of the past, the present, and the future. The (extended) entitlement approach perceives links between land and food as rational and objective, i.e., what is theoretically possible, so it is important to keep in mind that in decision-making, people do not always behave rationally to maximise their resources. There are many meanings to land, only one of which is as an exchangeable asset.

A bundle of rights metaphor is critiqued for overlooking the embeddedness of land in cultural, social, political, and economic relations, for example by Arnold (2002), Duncan (2002), and Verdery (1998). Sen's entitlement approach also ignores this embeddedness as it considers assets, including land, as something that is privately owned and can be exchanged through the market. The extended entitlement approach, on the other hand, does not take having endowments for granted, but can be used to explain how endowments are obtained. In such a discussion the embeddedness of land in cultural, economic, political, and social relations takes on a more prominent role as the mechanisms through which land can be obtained directly link to cultural and social relations, in addition to the market. By discussing not only the content of a bundle of rights but also how this bundle of rights was obtained necessarily explores relationships between people and between people and properties: locating a bundle of rights in the middle of society. Therefore, combining the extended entitlement approach with a bundle of rights metaphor creates a more complete understanding of how bundles of rights are obtained and therefore how a bundle of rights is embedded in cultural and social relations.

Section 2.3 identified several mechanisms through which social units can gain access to land. These mechanisms included exchange, membership, intra-family transfers, intra-community access, land markets, land reform, and labour and capital investment. The main mechanisms through which social units in Katuyanur gained access to land were similar to these mechanisms described in the literature, although the mechanisms of land reform and land markets were found to be more associated with ownership, while the access mechanisms of exchange, intra-family transfer, membership, intra-community access, and labour and capital investments included a broader set of arrangements of access to land. While the extended entitlement approach is useful to analyse how endowments are obtained, its usefulness depends on the definition of endowments. A bundle of rights metaphor shows that property relations are not only about ownership and indeed this chapter has identified several arrangements of access to land that do not include ownership. Using Sen's original definition of endowments, that what is owned, the majority of the access to land discussed in this chapter would not classify as an endowment and would thus fall short in explaining any access to land that exists without ownership. Consequently, Leach, Mearns and Scoones (1999) defined endowments as the rights and resources that social actors have. This definition still does not include several examples of access to land discussed here, especially access to land that only includes withdrawal and/or entry. Therefore, a complete understanding of access to land can only result from a broader definition of endowments; the assets, rights, resources, and labour social actors can access, i.e., benefit from.

In this chapter I discussed various arrangements in access to land between (individuals of different) households. The multiple bundles of rights derived from a single landholding that can exist within one household, i.e., the specific bundle of rights held by individual household members, will be discussed in section 8.2. In the village of Katuyanur, the two most important property types are state property, in the form of the reserved forest and *poramboke* lands, and private property, which includes arable lands and housing plots. Within each property type, various arrangements of access to land were found with a variety of bundles of rights for multiple social actors, not only for the owner. At the same time, the different property types did not have their own unique bundles of rights; the same set of five rights could be used to explain access to land in each property type category. The findings in this chapter thus support the critique voiced by Turner (2017); that categorisation of property types into the 'Big Four' unjustifiably conflates a great variety of property types and ignores connections, commonalities, and overlap between property types and between social actors.

Acknowledging the erroneousness of categorising property into four separate types also means that the five independent rights Schlager and Ostrom (1992) identified for common property are similarly applicable to private property and state property regimes. Access to land in Katuyanur is thus characterised by a multiplicity of arrangements and bundles of rights; from access to land that only includes the right of entry to access to land that includes all five rights identified by Schlager and Ostrom (1992). This does not

mean that the application of these rights, or 'sticks', within a bundle of rights is perfect to analyse access to land. The five independent rights described by Schlager and Ostrom (1992) appear static and objective. However, even within one right, or stick, hierarchies can exist, similarly to what Hann (2015) had already argued in his critique regarding the individual-collective dichotomy in property; two social units may hold a stick made from the same material, but one could be shorter than the other. In other words, not every social actor with, for example, withdrawal rights to a specific property can withdraw equally, for some these rights may be conditional, temporal, or with restrictions. The bundle of rights recognises hierarchies in bundles of rights but does not recognise the possibility of hierarchies within specific rights, or sticks, of a bundle. Yanagisawa (2008) argued that not all social actors within one community have equal access to communal lands and forests. This argument of inequality in access or rights can be taken a step further to cover not only communal lands and forests, but any type of property. A bundle of rights metaphor thus presents an inaccurate inflexibility and independence of the separate rights instead of allowing for rights to overlap, have restrictions, and be conditional and temporal.

This problem with a bundle of rights metaphor can be overcome by including the idea of bargaining. Access to land is about relations among people and a common understanding regarding who has which rights to which lands (Meinzen-Dick *et al.*, 1997). Since one specific property can contain several bundles of rights for different social actors, the person who owns the property is not always the same person who benefits from the property. This closely relates to Devereux' (1996) idea of the 'fuzziness' of property relations, i.e. the possibility in which control over the endowment and control over the entitlement can be held by different social actors. The 'fuzziness' of property relations provides opportunity for bargaining as several social actors can have an interest, a bundle of rights, in one property, and bargaining may take place if these interests are in conflict. Indeed, this chapter has demonstrated that bargaining regularly takes place between social actors over the content and continuation of their bundle of rights derived from a specific property. The bundle of rights bargained about varies according to the situation and is not always about ownership but can be about any of the rights within a bundle of rights.

The embeddedness of land in social, cultural, economic, and political relations results in gendered bundles of rights, as Meinzen-Dick *et al.* (1997) had similarly argued. A woman's bundle of rights is furthermore dependent on her relationship with men, because women rarely own land. Agarwal (1994) and Saxena and Parthasarathy (2016) argued that women among all castes and religions own considerably less land compared to men. However, not all women equally lack ownership over land. While caste indeed did not indicate the likelihood of women owning land, marital status and land size were found important indicators, as all women owning arable land in this study were married and almost 75% of the landholdings owned by women were marginal landholdings. The ownership of housing plots showed a different picture, as these were most likely to be owned by Malayali women as a result of government efforts to increase women's landownership through various schemes and land reallocation programmes. The small number

of women who owned land, either arable land or housing land, did not bargain with brothers, parents, or husbands for ownership. Instead, these women were either an only child and thus inherited their parents' land, or their ownership benefitted the household more compared to men's landownership because of eligibility rules for government schemes, particularly the Housing-For-All scheme and agricultural extension services, subsidies, and benefits. The 'fuzziness' of property relations thus may open up opportunities for bargaining over bundles of rights, the embeddedness of property in social, cultural, economic, and political relations also means that not everyone can initiate or participate in these bargains, resulting in gender inequality in obtaining endowments and consequently in bundles of rights that are highly gendered.

The most important social practice that highly influences gender inequality in land endowments and bundles of rights is inheritance. Most land transfers take place through intergenerational inheritance, but women miss out of inheriting land, resulting in a pattern of landownership skewed towards men. Local inheritance practices are rigid; landed property, including land owned by women, should be inherited by sons alone. The women in this study who owned land did not expect their daughters to inherit (part of) the land. Thus, even land owned by women is forced back into a patriline; the patriline of the woman's sons and grandsons. This chapter identified five reasons why daughters should not inherit land; daughters receive marriage gifts instead of their inheritance share in land, patrilocal residence makes it difficult for daughters to manage the land after marriage, daughters become the responsibility of, and responsible for, her husband and parents-in-law, women prioritise a good relationship with their brothers over land, and landowners do not own enough land. Married women should commit fully to the conjugal home, while simultaneously maintaining relations with the natal home by being a good sister who puts the happiness of her brother before her own rights. Women's rights to inherit landed property are recognised, but social norms expect women to waive their rights in favour of brothers. Any 'choice' a woman makes in terms of her inheritance to landed property is conditional. A woman who files a complaint with the police for being denied her inheritance of land faces social disapproval, while a brother who refuses his sister a share of inherited property is not scrutinised for violating his sister's rights at all. If she claims her inheritance of land, she loses her brothers' support, which she relies upon for her daughter's ceremonies and to fall back on if she faces problems at her conjugal home. Inheritance practice is thus clearly guided by social beliefs, preferences, and pressures rather than individual, isolated choices. These in turn determine who can obtain land endowments and who cannot and who can bargain over a bundle of rights and who cannot.

If the practice of patrilineal inheritance continues, women's landownership will never increase. Government schemes aiming to increase landownership among women will fail without a provision to enforce women's inheritance of landed property under the Hindu Succession (Amendment) Act, 2005. Considering the four layers of social organisation emphasised by Benda-Beckmann, Benda-Beckmann and Wiber (2006), people can support the inheritance law in general, at the layer of the legal institutional, but be against it in relation to their own land, or at the layer of the social relational, while having particular

ideological views on how it should be, for example if they owned more land. Villagers therefore do not consider the law on equal inheritance of landed property as wrong, and do not see their practice as conflicting with the law.

The current chapter discussed land as endowment, specifically using the extended entitlement approach to understand how endowments are obtained. As can be recalled from Figure 2.1, endowments can be transformed into entitlements. The next chapter will therefore explore entitlements, specifically command over food, while later chapters will focus on the processes of transforming endowments into entitlements.

Chapter 6 - Household Food Security in Katuyanur

The concept of food security was introduced in Chapter 1, emphasising the four pillars of food security; availability, accessibility, utility, and stability (Berry *et al.*, 2015; Sharma, 2013). A holistic view on household food security includes an investigation around the issues and achievements of these four pillars of food security. The four pillars cover aspects of needs and opportunities required for any household to be food secure. It covers food production, ecological, livelihood, and environmental stability, presence of food markets and labour markets, and recognises needs for clean water, sanitation, healthcare, and fuel for cooking. Sen's entitlement approach to analyse famine or starvation focusses on food accessibility, in which insufficient command over food is considered an 'acquisition problem' (Sen, 1985). The entitlement approach does not contest the potential role of food availability in starvation, famine, and food insecurity, but encourages the exploration of additional important causes (Osmani, 1993; Sen, 1985, 1981). Food security, or sufficient command over food, is the entitlement of interest in this chapter. Food insecurity would be the result of entitlement failure, in which there is insufficient command over food through exchange entitlements. This chapter only focusses on whether or not households are vulnerable to entitlement failure, i.e., food insecurity, as the next chapter will explicitly focus on mapping the exchange entitlements, or entitlement set, that links households' endowments to food entitlements.

Recalling from Chapter 1, food insecurity occurs when food security is limited or uncertain (Campbell, 1991; Maxwell and Wiebe, 1999). However, there is no universal method to measure household food (in)security (see section 2.2). Furthermore, food security does not represent a binary of food insecurity/food security but is a spectrum between severe food insecurity and food security. Such a spectrum, as opposed to defined categories or a binary, acknowledges heterogeneity among and within groups of peoples in terms of food problems, food preferences, and food needs. This chapter is therefore not so much on identifying households' levels of food (in)security, but on people's own perceptions and struggles regarding their household's food (in)security and the efforts and strategies they undertake towards achieving household food security. To discuss perceptions on household food security with household members I used the *Household Food Insecurity Access Scale (HFIAS) for Measurement of Household Food Access: Indicator Guide (v. 3)*, (Coates, Swindale and Bilinsky, 2007) to guide my questioning. In section 4.1 I introduced the HFIAS, which consists of nine occurrence questions and, if relevant, nine frequency-of-occurrence questions relating to peoples' perceptions on their household's vulnerability for food insecurity and their behavioural responses to vulnerability to insufficient access to food. These nine questions cover three important domains of food access; anxiety about a stable food supply, insufficient quality of food which includes variety and preferences, and insufficient food intake.

Tamil patrilineal households follow models of cooperative as well as non-cooperative bargaining, as discussed in section 2.1.5, and this chapter focusses on the aspect of pooling resources, food resources specifically. The aspect of bargaining about food allocation among the individual household members will

be discussed in section 8.4. As discussed in section 2.1.3, the boundaries of a household can be challenging to define. Among the households in this study, several situations indeed showed defining the boundaries of a household was not straightforward. In Katuyanur, men commonly worked as lorry drivers, requiring them to be away from home for days or weeks. The household members staying behind depended on the salary from the absent men to buy food. Are the absent men counted as household members? Even though they do not stay or eat at home? One elderly woman lives in the home of one son but eats in the home of another, to which household does she belong? The members of one extended family live in two separate houses but often, although not always, pool their resources and cook together, particularly when the married son is away from home for work; are they one household or are they two separate households? In addition, households are never static; during my fieldwork households expanded or shrank because of marriages, deaths, and births.

Moser (1993) criticised a common generalisation that households are a nuclear family with a husband, wife, and two or three children in which the husband is the household head and breadwinner. She gives several examples of the existence of households that comprise of extended families or households that are female-headed. I approached the household using Sharma's (1980) argument that a household is not only a kin group, but simultaneously an economic group. Therefore, I defined the household as those relatives who share one kitchen, eat from the same pot, and all those who consistently contribute to that cooking pot. That implied that households include absent husbands or sons who financially contribute to the household, I included the elderly woman in the household where she has her meals, and I counted the extended family as one household. This approach to the household is not infallible as economic cooperation exists between separately living relatives, particularly children supporting parents. A few households cook for hired labourers; Apsana regularly cooks for the construction workers her husband hires, which is why they consume 50kg rice a month, while otherwise 25kg would be enough to feed only their own household. Households often cook for visiting guests or give uncooked food to relatives. Households thus buy food for more people than only for the members of the household, and household members consume food that was not bought or prepared by their own household.

This chapter discusses households' command over food framed by the four pillars of food security. Pritchard *et al.* (2014) argued that food security in India is a problem of livelihoods as food security relates to the rights, freedoms, and capabilities of marginalised people to live healthy and well-nourished, while Scanlan (2003) argued that food security is a process that emphasises inequality. Households' vulnerability to food insecurity results from poverty, patterns of landholding and land quality, sociocultural, legal, and structural factors, according to Sharma (2019), from lack of labour demands, multiple labour engagements, and time constraints according to Stevano (2019), and from inequality in access to land according to Muraoka, Jin and Jayne (2018) and Pallas (2011). I argue in this chapter that household food security mostly

depends on the pillar of accessibility, in which household food security is an issue of access to income while income in a rural context is simultaneously highly dependent on endowments and lack of them.

The entitlement approach considers endowments (what is owned) as the foundation to obtain the means of subsistence (Appadurai, 1984). Entitlements are not rights; they do not constitute the means of subsistence people *should* have but the means of subsistence people *can* have (Leach, Mearns and Scoones, 1999; Mangubhai, 2014). The exchange entitlements, or E-mapping, that constitute all the possibilities of command over resources that can be derived from the endowments will be the focus of the next chapter. This chapter focusses on the varieties in households' endowments and the varieties in vulnerability to food insecurity and finds that the most crucial variables in food accessibility are land size category and source of livelihood. Caste is also an important variable, but mostly because caste overlaps with land size category and source of livelihood, thus confirming that food security is a socio-economic issue. No links were found between household food security and whether the *patta* to the household's farmland was held by a household member. Differences in livelihood options between households are crucial as these relate to different entitlement relations. While all households in this study lack sufficient command over food, the households found to be most vulnerable for food insecurity are ST households, who are most likely not to have access to arable land and most likely to depend on agricultural wage labour for their livelihood. The impact of unsustainable agricultural livelihoods is clear in villagers' perceptions, behavioural responses, and livelihood strategies aimed to increase household income. Men move into non-agricultural sectors for employment while women continue to work as agricultural wage labourers and in animal husbandry. Increasing food security is not always households' priority; the entitlement approach to analyse command over food is therefore not without problems, as it depends on households' choices in balancing food expenses with non-food expenses.

This chapter starts with a discussion around availability of food in terms of proximity to food markets, availability of wild foods for gathering, the local availability of staple foods, and food entitlements through the Public Distribution System (PDS). The discussion then turns to accessibility of food, which depends on various factors such as choices, preferences, and behavioural responses, and is investigated using nine food access questions from the *Household Food Insecurity Access Scale (HFIAS) for Measurement of Household Food Access: Indicator Guide (v. 3)*, (Coates, Swindale and Bilinsky, 2007). Next, I discuss food utility, based on access to clean water, access to sanitation and healthcare, access to safe and nutritious food, and access to cooking fuel. The last section of this chapter, before providing the conclusion to this chapter, explores stability of food through the inter-related factors of agricultural-market stability, ecological stability, and livelihood stability.

6.1 Availability

The first pillar of food security, availability of food, refers to sufficiency in quantity of food, acquired through production, markets, and food aid (FAO, 2006). Food availability is for households in Katuayanur

defined by four important characteristics. First, Katuyanur lies 3 kilometres from the nearest town where a few shops sell food, including fresh products such as milk, meat, and vegetables, and 6 kilometres from the nearest weekly vegetable market where everything required for cooking available. Inside the village itself, in the ST hamlet, one small shop sells shelf-stable foods such as rice, flour, sugar, oil, and spices. Second, Katuyanur is surrounded by the Katuyanur Reserved Forest, see Map 3.3, where non-food items such as firewood and food items such as wild cassava, tamarind, honey, rabbits, and fruits are available. The role of gathering firewood and food items in the forest in household food security will be discussed in section 7.2.1. Third, the widespread introduction of paddy in the area, as discussed in section 3.6.1, made more food available. Finnis (2007) had already suggested that changed consumption patterns could be due to external encouragement for farmers to produce commercial crops. Saravanan and Sarada explained that the introduction of rice as staple food had a positive effect on their food consumption:

Sarada: Now twenty years back, we did not eat as we do now. Twenty years before we did not have rice.

Saravanan: We struggled a lot.

Sarada: We made a powder from a root vegetable [wild cassava]. We had to cut that from the soil. (...) For a full night we had to boil it, only in the morning we could eat it. It was delicious, the root. We heat it.

Saravanan: There was no rice.

Sarada: Now we do not have such problems. It is not like that time. We did nothing to that root other than add water and boil it. Before, when my mother was there, in her lands we daily went to get the small root vegetables.

Saravanan: That is not needed today.

Sarada: Now we do not need it, but we can still get it. In this month that root is there, to eat. It tastes very good.

This history narrated by Saravanan and Sarada is not unique; Rengalakshmi *et al.* (2006) wrote that among Malayali communities, the traditional food staple included millets and wild yams, but introduction of commercial crops during the last three decades resulted in increased consumption of rice, overtaking the traditional food staple. The local increase in paddy cultivation thus introduced rice into the diets of Katuyanur's households, and the increased availability of rice positively influenced household food consumption.

Katuyanur's proximity to markets and shops results in every food item being available. None of my informants experienced any issues with availability of particular food items in the area. Besides food availability at the market and in shops, the Public Distribution System is also an important source through which food is available.

6.1.1 Public Distribution System

The Public Distribution System (PDS) is a nationwide government aid programme aimed to increase household food security through provision of food rations. As discussed in section 3.5.1, PDS is brought under the National Food Security Act, 2013. Food entitlements through PDS are transfer entitlements, one of the four entitlement relations defined by Sen (1981), as transfer entitlements are given by others (Rai and Smucker, 2016), in this case by the government. This food aid programme fits within India's national food policies, as Pingali, Mitra and Rahman (2017) had argued that policies for household food security focus on food provisions. Variations of a public distribution system have been in place since the Second World War, when people in the Indian continent faced severe shortages of food grains, but the precursor of the current public distribution system was set up in the early 1960s (Bala Ramulu, 2016). PDS is now incorporated in the NFSA, under which each state can amend the food items they offer against a subsidised price, but it always includes a free ration of rice. Every household has a PDS smartcard issued in the name of the eldest female household member, with which they are eligible to collect their rations each month at their local Fair Price Shop. The products available through the PDS in Katuyanur are rice, oil, dhal, wheat, and sugar. A few households also receive kerosene, which they use for cooking on stoves or to start a cooking fire with firewood. Entitlements to PDS rations are conditional as not every household is eligible to equal entitlements. The allocation of products per household depends on the household's income, assets, and the number of household members. There are five allocation categories, ranging from no commodities at all to 5 kg rice per household member, 1 kg dhal, 0.5 to 2 kg sugar, 5 kg wheat, 1 litre oil, and an additional 35 kg rice (Government of Tamil Nadu, 2019a). The category assigned to a household is printed on their PDS smartcard. This smartcard, as opposed to the previous ration card, is part of an electronic system directly connecting the smartcard to the personal details of a beneficiary, to eliminate leakage of PDS products through ghost beneficiaries (Government of Tamil Nadu, 2021).

The Fair Price Shop for Katuyanur is just off the road towards the nearest town, roughly a 15-minute walk from the ST hamlet and an additional 10-minute walk for those households living at the far side of Katuyanur Kaathu Valavu. This Fair Price Shop services not only Katuyanur, but every household, including from other villages, within a radius of approximately 2km from the Fair Price Shop. The Fair Price Shop opens twice a month, one day for rice and one day for the other products. The Fair Price Shop's opening days are announced shortly beforehand. In one informant's household it occasionally happens no one is at home on that day and then they have to do without the products for a month. However, few households in Katuyanur can afford to miss a month's rations and make sure someone collects the products, even if it means missing a day's work. As the local Fair Price Shop is a part-time shop, the government has not set any regulations on the opening days and opening hours (Government of Tamil Nadu, 2019b). Before the introduction of PDS in Katuyanur in the late 1970s, many families in the village

faced death due to starvation, especially among young children. Now, because of PDS, such starvation deaths no longer occur.

I visited the Fair Price Shop in early August 2019 when Rani's youngest daughter asked me to come with her to get that month's ration of sugar and cooking oil. Rani's daughter had been to the Fair Price Shop before with her parents, but never alone. When we arrived at the shop there were already many villagers waiting, mostly women. In front of the window and door of the shop, on the veranda, two queues had formed: one queue with women and with for men. Rani's daughter joined the back of the queue with women while I sat down on the steps to the veranda. In the hour waiting for Rani's daughter to receive the PDS products, many villagers came and went. Women came on foot or were dropped off by someone with a motorbike, while men arrived on a motorbike. Rani's daughter had given her household's PDS card to someone she knew standing in front of the line, so we only needed to wait one hour instead of two to three hours like other villagers. These long waiting times are not unique to this Fair Price Shop as Khera (2011) surveyed 1,227 households in nine Indian states, including Tamil Nadu, and found that 45% of the respondents had waited at least two hours during their last visit to the Fair Price Shop and 30% had waited more than three hours.

The Government of Tamil Nadu states that "[n]o cardholder shall be kept waiting unnecessarily and shall be serviced within 30 minutes at the latest" (Government of Tamil Nadu, 2019b). Saravanan's daughter-in-law was already at the Fair Price Shop when we arrived but had still not received her ration when we left. She explained that sugar, oil, and dhal distribution takes a long time, but on the day of rice distribution the queue moves much quicker. The number of people waiting in front of the Fair Price Shop was roughly twenty when we arrived, so I could not understand why that would measure up to a two-hour queue. The long waiting time for collecting PDS rations takes up almost half a workday, which could interfere with paid work, housework, or childcare. Opening hours are always during the day, and since women are more likely to be at home compared to men, women usually get the PDS products. In households where women also work outside the home, the women are more likely to take leave from work since women's daily wages are less compared to men's daily wages. The lengthy queues for the Fair Price Shop thus mostly affect women's work.

Although PDS products considerably increase food availability in the household, product quality, especially the rice, varies from one month to the next. However, even the best quality PDS rice is inferior to the rice sold in regular shops. Saravanan's household usually alternates one meal PDS rice with one meal shop-bought rice. He and his wife explained they consume more PDS rice when they do not have work and buy high-quality rice if they have work. The primary quality complaints related to the PDS rice are that the rice has a smell, much rice kernels have gone bad, it contains small stones, the rice is too big, it sometimes contains insects, it upsets the stomach, and the taste is not satisfactory. This is not a complaint only prevalent in Katuyanur as other studies on PDS covering various Indian states have found similar complaints

(Elayaraja and Manjunath, 2016; Khera, 2011; Pradhan and Rao, 2018). While the older generation consumes PDS rice, the younger generation, the unmarried children living at home, refuses to eat PDS rice. An MBC woman, a big farmer, argued the quality of the PDS rice itself is not bad, but how the Fair Price Shop stores the rice causes quick quality deterioration. The lacking quality of PDS rice means households prefer to eat high-quality rice bought from a shop at least once a day. Households who cannot afford to buy quality rice eat PDS rice for every meal. Most households agreed that PDS rice is very suitable to make batter for *tiffin* such as *dosa* or *idli*, but not to consume as boiled rice to go with a curry.

Households use PDS rice differently, depending on their ability to command food from other sources. Rani rarely uses PDS rice to boil rice, she only uses PDS rice to make batter for *dosa* or *idli*. During my stay in her home, we only ate boiled PDS rice once when Rani thought the rice looked better than usual and she was curious about the taste. Her youngest daughter was apprehensive to try the rice when she received a plate for dinner. Among the 20 interviewed households, eleven households use it as boiled rice and to make batter for *tiffin*. These include all seven ST households for whom agricultural wage labour makes up an important source of their livelihood. The remaining four are two ST households who rely on farming (Priti, a widow) or remittances from sons (Gayatri, separated from her husband) and two MBC households (both with access to only 1 acre of arable land). Five households, various castes with incomes from non-agricultural work or farming, use PDS rice only to make batter for *tiffin*. Four households, various castes whose incomes come from non-agricultural work or farming, choose not to consume the PDS rice at all. Anjali's household does not have their own PDS smartcard and is thus not eligible to collect anything from the Fair Price Shop. Households who keep cattle use the PDS rice as feed, while two households sell the PDS rice they do not use to a nearby farmer who keeps cattle for Rs.6 per kg. This practice of using PDS rice as cattle feed is not uncommon in Tamil Nadu, as Dhanaraj and Gade (2016) found the same practice in a different Tamil Nadu district. Households depending on agricultural wage labour for their livelihood and marginal farmers rely thus more on PDS rice for their daily consumption compared to other households.

PDS supplements people's diet, it is not meant to provide all the food a household requires. The Fair Price Shops provide rice as staple food and therefore the dietary variety of households depending on PDS for food availability within the home is limited. Simultaneously, PDS is important in making sure households do not need to skip meals or go without food for an entire day. Sarada stated that if PDS was not available, her household of six would face hunger. For one lorry driver's household, PDS is very important; without PDS they would eat less, which would affect their ability to work. Households depending on daily wage labour, particularly ST households, especially depend on PDS in times of lack of work and thus no income to buy food. However, ST households with livelihoods in non-agricultural sectors rarely finish their monthly PDS rice allocation and therefore do not think absence of PDS would affect their food consumption. Only Pandi's household (6 acres landowner, BC) chooses not to use the dhal and oil

from PDS either. While they use the sugar, they sell the rest of the products to other villagers. Households who do not consume PDS rice might not face immediate hunger if PDS would not exist, but since households keeping cattle use PDS rice as cattle feed, absence of PDS rice would mean greater household expenses for buying cattle feed, and thus could indirectly affect their food consumption. Households relying on agricultural wage labour thus depend most on the rations available through the Fair Price Shops, but since rice is the only staple food provided in large quantities, these households lack variation in diet and the single staple food offer does not address the aspect of food preference that is central to the definition of food security.

6.2 Accessibility

Adequate food availability does not mean every household is food secure. Even if enough food is available, and within short geographical distance, this does not lead to each household having sufficient access to food. Sen (1981) argued that differences in access to food result from socio-economic inequalities. The pillar of food accessibility emphasises the opportunities to acquire food based on food production, markets, or food services (Maxwell and Wiebe, 1999). The informants from the twenty households in this study differ in their endowments; they differ in the assets, rights, resources, and labour they can access, i.e., benefit from. Most households struggle with obtaining enough and varied food in the house but try to manage their food consumption by drawing upon all resources (all exchange entitlements) available to them. Households struggling to obtain sufficient amounts of food search for opportunities to expand their exchange entitlements, mainly by gaining or changing type of employment. The *Household Food Insecurity Access Scale (HFIAS) for Measurement of Household Food Access: Indicator Guide (v. 3)* (Coates, Swindale and Bilinsky, 2007) is a tool to measure household access to food. This tool consists of nine occurrence questions and, if relevant, nine follow-up frequency-of-occurrence question. Although the original nine questions and follow-up questions are closed-ended, I also used this tool to investigate informants' perceptions of their household's access to food, vulnerability for food (in)security, and their behavioural responses to vulnerability and shortage, by asking the informants to explain their answers to these nine questions. These nine occurrence and frequency-of-occurrence questions form the base of a point system that groups households into four HFIAS categories of vulnerability to access to food: severely food insecure, moderately food insecure, mildly food insecure, and food secure. The specific method for calculating the points and categorising households into one of the four HFIAS categories is explained in Appendix II. The HFIAS categories for the interviewed households are shown in Table 6.1, and the categories for the surveyed households are shown in Table 6.2 and an elaborate table can be found in Appendix III.

Tandon and Landes (2011) had estimated that at least 60% of India's total population is food insecure. The data presented in Table 6.2 shows that for Katuyanur this percentage is similar as only 33 out of 103 households reported to be food secure, leaving 68% of the households to be food insecure. Indicators for vulnerability to household food insecurity established in the literature, as discussed in section

2.2, include poverty, patterns of landholding and land quality, sociocultural, legal, and structural factors (Sharma, 2019), lack of labour demands, multiple labour engagements, time constraints (Stevano, 2019), and patterns in access to land (Muraoka, Jin and Jayne, 2018; Pallas, 2011). Evidence from Katuyanur supports these vulnerability indicators reported in the literature, but I argue to add the indicators of reliance on food services, or transfer entitlements, and type of livelihood to these factors.

Focussing first on access to land, an endowment elaborately discussed in the previous chapter, Table 6.1 shows that for the interviewed households, access to land does not guarantee food security, as there are also households with access to land that are food insecure. Similarly, not having access to land does not guarantee food insecurity as there are also households without access to land who are food secure. Surprisingly, among the households with access to land, one-third is food secure and one-fourth is severely food insecure. Among the eight households without access to land, one-fourth is food secure and only one is severely food insecure. The number of interviewed households was only small, but the results from the survey among 103 households similarly problematises the assumption that access to land increases food security. Summarised in Table 6.2, the survey findings show that 24% of landowning households are food secure and 44% are severely food insecure while 39% of landless households are food secure and 39% are severely food insecure. This suggests that, contrary to what might be expected, households with access to land are not necessarily better off in terms of command over food compared to households without access to land.

Second, focussing on sociocultural factors, specifically caste, shows that among the surveyed and interviewed households (Table 6.1 and 6.2), BC households are most food secure, SC and ST households are least food secure, and MBC households take a middle position. Among the ST households who are food insecure, there are farming households, households without access to land who work as agricultural wage labourers, as well as landless households who work in non-agricultural sectors. This suggests that ST households are least equipped to obtain sufficient command over food.

Third, rations distributed through PDS, which was discussed in section 6.1.1, are important to many of Katuyanur's households, and use of PDS is a good indicator of a household's vulnerability to food insecurity. The data presented in section 6.1.1 showed that households with agricultural wage labour as main livelihood and marginal farmers are most reliant on PDS compared to any other social unit. Table 6.1 shows the interviewed households' use of PDS rice and their HFIAS category. Comparing these two factors indicates that all households who report moderate and severe food insecurity consume PDS rice and only one of these households uses the PDS rice only to make batter. As discussed in section 6.1.1, PDS rice is considered very suitable to make *tiffin* batter, but not suitable to consume as boiled rice to go with a curry. The food secure households and the one mildly food insecure household do either not consume PDS rice at all or only to make batter. This confirms that household consumption of PDS rice is a very good indicator of their (in)ability to obtain sufficient command over food. Those households where their livelihood alone

results in entitlement failure rely on PDS rice as transfer entitlement to fill the gap between the food they can obtain through exchange entitlements and what they actually need to prevent starvation.

Household	HFIAS Category	Caste	Access to Arable Land	Consume PDS Rice?	Household Main Livelihood
1	Food secure	BC	Yes	No	Farming
2	Food secure	BC	Yes	No	Farming
5	Food secure	MBC	Yes	Yes (For batter only)	Farming
3	Food secure	MBC	Yes	Yes (For batter only)	Farming
17	Food secure	ST	No	Yes (For batter only)	Non-agricultural
19	Food secure	ST	No	Yes (For batter only)	Non-agricultural
15	Mildly food insecure	ST	No	No	Non-agricultural
6	Moderately food insecure	MBC	Yes	Yes	Non-agricultural
7	Moderately food insecure	ST	Yes	Yes	Farming
10	Moderately food insecure	ST	Yes	Yes	Agricultural wage labour
12	Moderately food insecure	ST	Yes	Yes	Non-agricultural
11	Moderately food insecure	ST	Yes	-	Agricultural wage labour
13	Moderately food insecure	ST	No	Yes (For batter only)	Non-agricultural
16	Moderately food insecure	ST	No	Yes	Non-agricultural
18	Moderately food insecure	ST	No	Yes	Agricultural wage labour
20	Moderately food insecure	ST	No	Yes	Agricultural wage labour
4	Severely food insecure	MBC	Yes	Yes	Farming
8	Severely food insecure	ST	Yes	Yes	Farming
9	Severely food insecure	ST	Yes	Yes	Agricultural wage labour
14	Severely food insecure	ST	No	Yes	Agricultural wage labour

Table 6.1. HFIAS Categories among Interviewed Households

The fourth indicator for vulnerability to food insecurity is a household's main source of livelihood. Among the surveyed households, the balance between farming and agricultural wage labour as main source of income lies towards farming for the food secure households and tilts towards agricultural wage labour when households become increasingly food insecure (see Table 6.1 and Table 6.2). Looking more closely at caste, main source of livelihood, and food accessibility, the data shows that households with agricultural wage labour as main source of income are the most vulnerable to food insecurity. This is in line with the findings presented by Pritchard, Rammohan and Sekher (2017) that agricultural wage labourers have a less diverse diet compared to farmers and compared to non-agricultural labourers. Among the interviewed households (Table 6.1), none of those depending on agricultural wage labour for their main source of livelihood are food secure. However, households without access to arable land but with non-agricultural livelihoods are found in all HFIAS categories except severely food insecure. This is not surprising, as Rammohan and Pritchard (2014) already found that access to land for cultivation does not ensure food security and that land-based livelihoods are disappearing into the background due to

livelihood diversification needs. Section 7.1.1 will focus more specifically on the links between land size and household food security, but it is clear that the majority of farmers in Katuyanur are marginal farmers who need to diversify their livelihoods for survival. While the composition of households in Katuyanur is very different from the village studied by Gough (1982), as there are no brahmin families in Katuyanur, willingness to cultivate is not so much linked to caste and their perceived status, as Gough found in her study, but has more to do with perceptions of modernity and backwardness as the younger generation, regardless of caste and educational levels, prefers to work in any non-agricultural sector.

		HFIAS Category			
		Food Secure	Mildly Food Insecure	Moderately Food Insecure	Severely Food Insecure
Caste	BC	6	0	1	1
	MBC	11	3	4	9
	SC	1	0	1	3
	ST	15	4	15	29
Ownership over arable land	No	11	4	11	20
	Yes	22	3	10	22
Household Main Livelihood	Farming	20	4	9	13
	Agricultural Wage Labour	13	3	12	29
Main Livelihood BC	Agricultural Wage Labour	0	0	1	1
	Farming	6	0	0	0
Main Livelihood MBC	Agricultural Wage Labour	2	0	1	3
	Farming	9	3	3	6
Main Livelihood SC	Agricultural Wage Labour	0	0	0	1
	Farming	1	0	1	2
Main Livelihood ST	Agricultural Wage Labour	11	3	10	24
	Farming	4	1	5	5

Table 6.2. HFIAS Categories among Surveyed Households

Among the surveyed households (non-agricultural livelihoods were not included in the survey), the BC households who farm are all food secure, while the BC households whose main livelihood is agricultural wage labour are moderately or severely food insecure (see Table 6.2). For the other castes there is not such a clear pattern, as there are farmers who are food secure as well as food insecure and agricultural wage labourers in all HFIAS categories. However, the only SC household with agricultural wage labour as main source of livelihood is severely food insecure and the half the ST households with agricultural wage labour as main source of livelihood are severely food insecure while less than 23% of the households in this category are food secure (see Table 6.2). While government data showed that SC and ST households in Tamil Nadu disproportionately depend on agriculture for their livelihood (see section 3.4.2) and Mitra (2014) observed that households with low income are disproportionately ST an SC

households, the evidence presented here can only confirm that ST households disproportionately rely on agricultural wage labour for their main source of livelihood and are therefore disproportionately vulnerable to food insecurity.

Command over food thus relates to the household's principal sources of income: whether these are from cultivation, agricultural wage labour, or non-agricultural labour. Data from the surveyed households reveals that average weekly spending on food is lowest among marginal farmers, compared to small and big farmers and household without access to arable land, while big farmers spend most on food per household member per week. Among the interviewed households, worry about having enough food to eat occurs in farming households as well as in households without access to arable land. However, among farming households, only those with access up to 2 acres of land, or marginal farmers, worry. Households without access to arable land who do not worry get their main income from non-agricultural sectors. Households depend on the market to buy food and therefore villagers worry about work opportunities and earning enough money. Agricultural wage labourers in particular worry about work availability. Apsana explained:

This week we have work, we can eat. Next week will we have work or not? How will we eat? The children need to eat, that is what we think of. Weekly we have these thoughts. This week we have work, next week that worry comes. (...) Next week will there be work? How will we get money to pay loan instalments, how will we buy food? Like that we think.

Insecurity about work, about income, and about the ability to buy food is always there for daily wage labourers. Work availability relates to rainfall as without rainfall farmers cannot cultivate and require no labourers, an important aspect that will be discussed later in section 6.4. Work availability also relates to cultivation patterns. Farmers in Katuyanur recently switched from cultivating a variety of labour-intensive crops, such as millets, paddy, turmeric, and groundnut, to cultivating commercial crops such as sugarcane and cassava, which require little labour (see Table 3.6) and thus directly affected labour opportunities for agricultural wage labourers. Households depending on paid labour struggle to save money; they live a hand-to-mouth existence, usually depending on weekly payments. The implication is that if they fall short of food, they must wait until they get paid next. Apsana explained their way of life as followed:

Once there was no rice to cook, but we could not buy until the evening. Only after going to work and get money could we buy it. Then when we need it on Friday, on Fridays they [employers] never give wages, on both Tuesday and Friday they [employers] say that. Then we need to adjust with what we have.

Worry about food thus means worry about agricultural income, worry about labour opportunities, and worry about getting paid. These worries thus depend on local circumstances and are often out of the direct control of the household.

Most of my informants cannot eat foods they prefer; their diets depend on their variable income and on the variable market prices of food items. Not only households without access to arable land are unable to consume their preferred foods due to income restrictions. One woman, an MBC marginal farmer, explained: “we do not have money all the time, so we just make what we have at home.” Some households cannot even afford to buy something extra on special occasions. Ambika confided that her children sometimes ask things they want to eat, but she cannot often give that to them:

The children ask, can you cook that tomorrow mum, like that they ask, but in such situations, I cannot do anything. On their birthdays they asked for a cake, and a vegetable dish, but even that we could not buy, and I feel bad about that. Then I had to say ‘no, not this time’, and they were sad.

For many households, insufficient money to get food they prefer is an everyday reality and therefore they do not even think about what foods they prefer to buy and eat. They base their entire food consumption on adjusting with what they have. Common responses included “we do not think like that [what we cannot buy]. If it is not there, it is not there” and “if we have money, we think about what to eat, if we do not have money, we do not think about it. If we do not have money what use is thinking about what to buy?” Apsana described the relationship between having work, buying the kinds of food they prefer, and other expenses as followed:

We always eat rice with a curry and *rasam*. We do not think ‘if we had money, how do we eat’. We do not think about that. We adjust and eat what we do have. (...) I think about what to cook, but it is difficult, so whatever I can, I cook, and we eat. If for three days we have work, but also a loan to pay, then we cannot buy the food we want. Therefore, we eat what there is. That is why we work. In the weeks we get money we think about what we want to eat. When we need to repay a debt, we control ourselves and eat what we have.

Among the specific food items informants like to eat but cannot afford, most informants mentioned meat. Among the 103 surveyed households, only 6 households are vegetarian and within 2 additional households some household members are vegetarian. This suggests that for nearly all households, meat should be an important part of their diet, but limited income means most households cannot afford to eat meat frequently. Particularly households of agricultural wage labourers eat meat less than once a month. Sarada explained whether to eat meat is a calculated decision:

There is no work now. For two months there has been no work. We are staying at home. What can we do? If we want to eat meat, we cannot. We cannot eat what we like. We have nothing [any money] today, if we get a loan today, if we get 500 rupees loan, but

there is no work, then how can we repay the 500 rupees? If we have work, we eat meat once a month. If we do not have work, once in two months.

These findings suggest that the data from the NFHS-4, in which around 70% of respondents eat meat or fish only once a week and around 20% eat fish or meat even less than once a week (International Institute for Population Sciences (IIPS) and ICF, 2017), suggests a much higher consumption level of meat compared to what is found in Katuyanur. Indeed, the survey data from Katuyanur reveals that only 50% of the households eat meat or fish once a week and 40% of the households eat meat only once a month. Meat consumption in Katuyanur is thus much lower than the average in Tamil Nadu. Parents often only buy and prepare a meat dish when a child asks for it or as a treat when sons who stay away from home for work come home for a couple of days. Santhi explained:

We cannot always buy meat, if we have money, we can buy it, if we do not have money, we cannot buy it. So, we get it monthly. If the children come, we get it. If the children are not here, we do not get it. The children are staying outside now, it is only the two of us here, so we do not feel the need [to eat meat].

Households enjoy eating meat, but it is expensive and therefore considered a dish for special occasions to eat only twice a month at most.

Vegetables is another food group that households prefer to eat more. Vegetables that villagers regularly eat are leafy greens, carrot, beetroot, beans, aubergine, okra, drumstick, white radish, and tomato. On days when households do not have vegetables, they make dhal or *rasam* to go with rice. All but one informant preferred to eat vegetables every day, but 12 of the 20 interviewed households eat vegetables at most three days a week and only six households eat vegetables every day. Among the surveyed households, only 43% reported to eat vegetables on a daily basis. NFHS-4 data from Tamil Nadu shows that only 60% of respondents consumed vegetables every day, which is a much higher percentage compared to the consumption pattern of Katuyanur's households. Households with access to arable land can use a patch of land to grow vegetables for their own consumption. This does not provide enough variation of vegetables for every day of the week, but it means they can buy vegetables less often. Not every household with access to arable land cultivate vegetables. Ambika cultivated paddy last year, therefore her household has enough rice to eat, but she does not grow vegetables or pulses. Their regular income is Rs.300 a week from milk sales, with which they can only buy vegetables for one or two days a week. A few households without access to arable land use a section of their housing land as kitchen garden. Santhi grows a small variety of vegetables next to her home. This does not produce enough for her and her husband, they still need to buy vegetables from the market, but without this kitchen garden they would eat vegetables even less than 2-3 days a week. The inability to eat vegetables each day of the week occurs

across all communities, among households with access to arable land and among those without, and across every source of livelihood.

Thinking about what foods one wishes to buy is a luxury only for households who are economically better off. Households struggling to buy enough food are accustomed not to think about what they want to eat, just that they eat enough. Poor households' choice of meals is disconnected from their preferences and is completely controlled by money availability. Poor households therefore find it difficult to express what their food preferences are, in part because they do not see any use in thinking about what they cannot have. The ability to eat preferred foods is an important aspect of food security, as per the 1996 definition, but for most households in this study, food preferences are beyond the reach of their incomes.

This does not mean food preferences do not play any role in households' food consumption. Generational differences in food preferences, particularly in relation to the staple food, do influence the household's food consumption. The change in cultivation patterns as described in section 3.6 influenced consumption patterns. Less than 30 years ago, the staple food in Katuyanur comprised millet varieties. Today, rice is the staple food. The older generations, who grew up with millets as staple food, consider millets much healthier food compared to rice. Finnis (2006) argued that millets are considered a 'tribal' food and therefore not 'modern', and the loss of millets in diets has resulted in a loss of dietary and nutritional diversity. Indeed, Katuyanur's younger generation, teenagers mostly, refuse to eat millets and prefer to eat rice three times a day. Similarly, Kalita (2014) found that younger generations in the state Jharkhand only want to eat rice and consider millets the food of the rural ignorant and illiterate population. Katuyanur's younger generations even prefer rice over other traditional south Indian dishes such as *idli* and *dosa*, and over wheat-based *chapatti*. According to informants with teenage children, their children ask for rice three times a day. Middle-aged and elderly informants insist their food was better and healthier 30 years ago when they had a mixed diet with healthy and nutritious foods such as millets, cereals, and fruits instead of the current monotonous diet of rice for every meal. They even blame the high occurrence of diabetes, high blood pressure, high cholesterol, and cancer to chemical use in food production and to the changed consumption pattern. Generational food preferences mean that price fluctuations of food products in the market affect people differently. If the price of millets increases and becomes unaffordable for households, this does not directly affect the food security of the younger generation, but it does impact the food security of older generations as the latter might not be able to afford their preferred staple food, compelling them to eat rice instead.

Not being able to eat the food one prefers closely relates to not being able to have a varied and nutritious diet. The local Panchayat Secretary stated people only require that they eat enough food; people do not think about whether it is healthy or nutritious. Most informants eat only a limited variety of food. On most days, meals consist of rice with dhal or *rasam*, and on days when a household has money to spend, they add ingredients such as vegetables or meat. One woman, an agricultural wage labourer, stated: "what

we eat is this, rice.” Her husband, a driver, added: “mostly we eat dhal. We eat dhal four days [a week]. We have only one curry for one day. Lunch, dinner, evening, morning; all the same [curry].” A few households occasionally replace one rice meal for a meal of millet, *chapattis*, *idli*, or *dosa*. Households worry about having enough food to eat; worrying about the nutritional quality and diversity of diets is a luxury their current financial situations do not allow.

Households sometimes receive food or cooking ingredients from relatives or neighbours. Busby (2000) observed that the women in the South Indian coastal village of her study often share their cooking with other households, especially when something special has been prepared. Although this practice did not happen often in Katuyanur, it did occur, although it was more likely that home-grown cooking ingredients were shared. Rani’s mother grows snake gourd in front of her house, more than she and her husband can consume, so every once in a while, she gives a few to Rani. Rani does not like snake gourd, but she nevertheless accepts one piece to prepare a meal and returns the rest to her mother or passes it on to a neighbour. By preparing one meal with a vegetable she does not prefer, she can save the other vegetables she has at home for another day.

Among the informants’ households, nine (across caste, land access status, and main livelihood) sometimes consume foods they dislike because they cannot afford to buy anything else. While a few informants stated there is no particular food they do not like (“we eat what we always eat”), most households accept they sometimes have to eat foods they do not favour. A landless lorry driver explained: “If we do not like it, we do not avoid it. If it is still good, we eat it. Only if it has gone bad, we throw it away.” Very few informants could recollect specific meals they sometimes eat but prefer not to. One young ST woman, a marginal farmer, said while laughing: “hmm, when we have only *rasam* with rice. If we have nothing else [to cook] what can we do, we have to eat that.” As households do not think about what they prefer to eat, neither do they consider what they dislike eating, as the variety in their meals is limited.

While households regularly need to adjust their cooking depending on their income and expenses, they never need to adjust their food quantity; everyone can always fill their stomach. Only five informants said that on rare occasions their meals are too small, which is similar to the 31% of the surveyed households who reported that they sometimes eat less than they think they should. Sarada, for example, prepares a dish requiring fewer ingredients if she is short on vegetables: “We do not eat less than fits the stomach. If we do not have enough vegetable curry today, then you know what I do? I make *rasam*.” Most informants do physical, heavy work and cannot afford to eat less than they need. A common response was: “If we eat less, we are hungry, then how can we work? We need to do agricultural work, we need to eat.” Since every household receives free PDS rice, even if they cannot afford to buy anything, they can still fill their stomachs with boiled rice.

Not everyone in all 20 households always eats three meals a day, only in six households does every household member consistently eat three meals a day. In the remaining 14 households, some or all

household members regularly have only two meals a day. On such days these household members eat a late breakfast, between 11 am and 1 pm, skip lunch or take a tea instead, and then have dinner around 8pm. Informants rarely gave lack of food as reason for skipping a meal, instead, they blamed it on their workload or described it as a habit. However, among the surveyed households, 46% sometimes skip a meal due to lack of money compared to 40% who sometimes skip a meal due to workload, suggesting that money is more often the reason for reducing the number of meals a day than workload, although the difference is small. A few informants eat fewer meals when they do not have work and more if they have work because work makes them hungry. In cultivating households, however, household members eat fewer meals if there is work on the field. Kumar clarified: "If there is work in the field, we [my wife and I] do not come home for lunch. We eat at night. If there is no work, we eat [lunch]." Agricultural wage labourers take a late breakfast and sometimes skip lunch if there is additional work to do at home. Santhi and her neighbour, both middle-aged agricultural wage labourers, explained their routine: They leave home for work at 7.30am, without having eaten anything, and at 10am the farmer they work for usually gives tea. At 11 am they go home for an hour for breakfast. They finish work around 3.30pm, but then there is work at home, such as laundry or milking cows. They may take another tea in the evening, but do not eat another meal until dinner. Even when they do not have paid work, there is plenty to do at home, so even on those days they have breakfast after 11 am, no lunch, and their second meal is dinner. Prioritising work over having a meal thus occurs among cultivators and among households without access to arable land, and among men as well as women. Frequently skipping meals resulted for many in a habit of eating only twice, even on days without work. Rani always eats only twice a day. She cannot remember when or why she started this but eating only twice has now become her habit. Even on days she works as an agricultural wage labourer, the number of meals she consumes does not exceed two. During months of plentiful work, she experiences rapid weight loss but still continues to skip lunch as she does not feel hungry. Eating fewer than three meals a day is thus not always a sign of food shortage within the home, but of responsibilities for taking care of cultivation and the household have overtaken priorities over health. Elderly people often eat fewer than three meals a day, not because of workload or food shortage, but because they do not feel like eating because of their age, physical weakness, and weak digestion.

In some households, workload not only interferes with eating meals but also with food preparation. Ambika's husband works as a daily wage labourer at the railways, leaving Ambika responsible for all housework, care of cows, and cultivation of their land. Ambika explained it is difficult for her to combine the work:

I cannot say that [the children always eat lunch]. They do not always eat at school. They do not like the food there. There is no water, so they cannot eat food, the food there is not the food they like. The situation is that they go to school at 7[am], but when they leave

at 7[am] I am milking the cows, my husband is getting ready for work, so I do not have time to make them food. I send them off [to school without breakfast].

Most households with children, however, prioritise their children's meals and make sure their children always eat enough. One Malayali couple without access to arable land stated:

Wife: Regardless how difficult, we will buy food.

Husband: Before we had children, sometimes we ate less.

Wife: We want food for the children; therefore, we will have food.

Children who attend government schools receive rice meals for lunch at school as part of the government's Mid-Day-Meal scheme. However, like Ambika's children, not all children eat this government-provided lunch. Private schools are not included in the Mid-Day-Meal scheme, so schoolchildren attending private education need to bring their own lunches from home.



If household income is insufficient, resulting in food entitlement failure, households use three different coping strategies to prevent hunger or starvation. Maxwell *et al.* (2003) identified four common coping strategies for managing food security; change of diet, borrowing or purchasing food on credit, sending household members elsewhere, either just for a meal or more long-term such as migration, and rationing available food. These common coping strategies are also found in Katuyanur but can be more specified for the specific circumstances of the households in Katuyanur. The first strategy is to *compromise on the quality of food*. As mentioned earlier, struggling households daily eat low quality PDS rice to limit their expenses on quality rice from shops. A young ST woman, a marginal farmer, often eats boiled PDS rice but does not prefer to: "it [PDS rice] is not good, but what else can we do? We have to eat and fill our stomachs." Low food quality affects Ambika's appetite: "even with a good tasting curry we cannot eat it [PDS rice] well. A good curry with good rice we can eat well. With the PDS rice eating food is hard." Farmers only eat PDS rice when they could not cultivate paddy, and households without access to arable land buy quality rice when they have paid work and eat PDS rice in times of job scarcity.

The second copying strategy is to *compromise of dietary variety*. The first food households exclude from their diet is meat, which most households do not mind, the second food is vegetables, which households mind considerably. Anuja explained:

I do not think about not having rice, but I do think about not having a curry. When we buy vegetables, we buy only a little. I can cook rice, but having a curry is important. I do think about what to do if we do not have vegetables.

Households who need to reduce the cost of their meals do not have to compromise on the quantity of food, but compromise in dietary diversity by leaving out ingredients, particularly expensive fresh

ingredients such as vegetables and meat. This is important to note as some literature, for example Devereux (1993), identify rationing as an important response to a household's food deficit.

The third coping strategy is *getting loans or borrow money to buy food*. This practice is quite prevalent in Katuyanur and ranges from small amounts of money borrowed from relatives or neighbours to formal loans meant for business investments (micro-loans), but instead used for daily expenditures. The Panchayat Secretary explained there are many financial institutions and small private banks coming to the area now, which is a problem because people are taking multiple loans and accumulate debt. This practice of getting consumption loans is not unique to Katuyanur, as Devereux (1993) argued that people will get loans for food "if and when they perceive the cost of borrowing as less than the cost of other strategies - eg the revenue loss from selling a productive asset, or the welfare cost (in terms of current hunger) of not borrowing" (Devereux, 1993, p.55). Villagers can easily buy products on credit at the local shop; Rani keeps a notebook in which she records every item someone received without paying. Villagers with a debt at the shop pay their outstanding bill once a week after receiving their wages. If Gayatri has no work and no money, "I get a debt and eat", but constantly worrying about how to buy food "is mentally difficult." Informants from households with younger children say they make sure there is always something to eat, even if that requires borrowing money. A grandmother, a marginal ST farmer, stated: "there are children here, so we will get a loan and eat. We cannot have nothing in the house with children here." While adults will compromise on their own food consumption, they make certain their young children and grandchildren are not hungry and do anything, including getting in debt, to ensure there is food for the children.

The first two common coping strategies in Katuyanur may prevent starvation, but in the long term can lead to serious health issues due to nutrient deficiencies. These two coping strategies also relate to food preferences to food quality and food variation; food preferences are foregone to cope with financial constraints. The common practice of getting in debt for food results in households ending up in a downward spiral of increasing debts, unless they increase their income. Besides these three common coping strategies, several extremer coping strategies occur, particularly in situations of sudden expenses such as medical costs or marriage gifts. One of these extreme measures is to drink water instead of having a meal or add water to boiled rice. It rarely happens households have nothing to eat, but tough times do occur. Sarada explained:

No, it is not like that [being hungry] now. Whatever little we have, it is enough. If we can get agricultural work, we are good. If we eat, if we get a loan to eat, we do think what we should do. But we never have no food, we are never hungry. Even if it is very tough, we boil rice and eat it with water, kanji. When we do not have a curry, we add water, and everyone drinks two tumblers. That we do.

This extreme coping strategy of filling the stomach with rice water instead of food is fortunately rare, and never lasts many days as people find other ways to cope, such as borrowing money.

The coping strategy identified by Maxwell *et al.* (2003) that entails sending household members elsewhere for a meal or having household members migrate to reduce the number of household members to feed, is not a common strategy in Katuyanur, although, as discussed earlier in this section, households with young children do rely on the children taking the Mid-Day-Meal at school or *Anganwadi*. For the households in this study, food is a major expense and average household incomes cannot fulfil preferences of diet. Households most vulnerable to insufficient access to food are marginal farmers and households relying on agricultural wage labour, both categories that characterise ST households. These findings resonate with the findings from the 103 surveyed households in Katuyanur. SC and ST households were almost twice as likely to report being severely food insecure compared to BC and MBC households. Households with agricultural wage labour as primary source of income reported higher incidence of food insecurity compared to households whose main livelihood was farming.¹ For access to food, all households depend on income to buy food. Income derived from selling agricultural products, from selling labour, or both. Households' worry about access to food thus takes the shape of worry about labour opportunities and worry about agricultural productivity and income.

6.3 Utility

The definition of food security, as stated in the introducing chapter, includes access to safe and nutritious food. These two aspects appear in the utility pillar of food security. The utility pillar is concerned with the link between food and health and includes clean water, a diet adequate in diversity and nutrients, sanitation, and health care (FAO, 2006). Access to food is not sufficient for a safe, healthy, and nutritious meal. Food needs to be prepared, which requires access to clean water and access to fuel. The latter is not included in utility as defined by FAO (2006), however, since it is just as important as clean water to prepare hygienic and nutritious food, I include access to fuel in utility.

Katuyanur does not have a health clinic. The nearest private clinics are in the town around the weekly market 6km from Katuyanur. In that same town there is a government hospital. The 2011 census indeed shows that all forms of health services are between 5 and 10km from the area of Katuyanur (Government of India, 2011a). Every once in a while, a private hospital or health clinic organises a health camp in the village of Katuyanur where simple tests, consultations, and free medications are offered. Access to healthcare is not a particular issue in Katuyanur since most households own a motorbike and can easily reach the nearest private clinics. In terms of sanitation, only a small number of households have private latrines; only the recently constructed houses build in the modern flat roofed style have a permanent bathroom with latrine and septic tank. The majority of households only have a temporary structure outside the house for showering without any drainage system or septic tank. This is not uncommon in the area, as the 2011 census for rural Omalur, the sub-district in which Katuyanur is located,

¹ The household survey focussed only on households whose main livelihoods related to agriculture, therefore households whose main income comes from non-agriculture were not included in the survey.

shows that only 8% of rural households have a latrine with septic tank while 82% of rural households have no latrine at all and 80% of rural households have no drainage for waste water (Government of India, 2011b). None of the houses in the old part of the ST hamlet have a latrine as these plots are too small for a latrine building and as half these plots are registered under *kootu patta*, they are ineligible for the government's sanitation scheme; the Total Sanitation Campaign (TSC).

In terms of access to clean water for cooking, every household in the ST hamlet is connected to the Panchayat bore-well, as discussed in section 3.6. Rani switches on the pump twice a day, a few hours in the morning and again in the evening. As only few houses in Katuyanur Kaathu Valavu are connected to the Panchayat bore-well, most rely on water from an open-well or bore-well in their own land. The high presence of bore-wells for drinking water in Katuyanur Kaathu Valavu differs from rural Omalur as a whole, where 79% of rural households rely on tap water, 9% rely on a well, and only 9% of rural households rely on a bore-well for access to drinking water (Government of India, 2011b). A few households in Katuyanur Kaathu Valavu do not have their own source of water, nor the connection to the Panchayat bore-well. For this reason, already before she lost access to the land, Gayatri moved from the house in her mother-in-law's land to a rented house inside the ST hamlet. Amudha has an open well in her land, but it runs dry the majority of the year, so Amudha spends two hours each day to get five *kodams* of water from the ST hamlet and she does the household's laundry at a water tap in the ST hamlet. My informants from the ST hamlet initially reported they always have enough water for home-use, such as cooking, drinking, bathing, doing laundry, cleaning dishes, and for their livestock to drink. However, in the months between my two field visits, between April and May 2019, right before monsoon season, the groundwater level had dropped drastically, and the Panchayat bore-well could not pump up any water. Households in the ST hamlet had to buy water from the nearby town, which was brought to the village in water tankers. The same had happened a year earlier. A few weeks before I arrived in July 2019, the Panchayat installed a second, deeper, bore-well, which resolved the water shortage. In extremely dry months, it has happened that wells run dry and households in Katuyanur Kaathu Valavu also had to resort to buying water brought in from the nearby town. Households living in the ST hamlet thus have better access to water, thanks to the Panchayat bore-well. Marginal farmers are more likely not to have their own water source, and thus they face most problems accessing enough clean water for daily household use.

Reliance on a bore-well for water requires a reliable electricity supply for the motor. According to the 2011 census, 88% of rural households in Omalur have electricity (Government of India, 2011b) and indeed most households in Katuyanur are connected to electricity. However, the supply of electricity is not always stable with regular power-cuts, which means there is no water for household use. Once a month the electricity is shutdown between 9am and 5pm. The electricity company makes this shutdown known a day before with a text message to its customers. On these days, Rani switches on the motor earlier than usual so villagers can collect enough water for the day in *kodams*. However, not every power-cut is planned.

During one particular week of my fieldwork, for multiple subsequent days, the electricity kept switching off and on without a known reason, which resulted in the motor, which pumps the groundwater up, also constantly switching off. Rani tired of walking back and forth to turn on the motor every time the electricity came back, so eventually she gave up, which meant there was no water. Access to water thus does not only rely on the facility of a bore-well and a water storage tower, but the depth of the bore-well is important for year-round water flow and a stable electricity supply is required.

Fuel, required for cooking, is available from multiple resources. The 2011 census indicates that in rural Omalur, the main source of cooking fuel is firewood, with 58% of rural households using firewood for cooking. The second most used fuel is gas, for 36% of rural households, and only 3% of rural households use kerosene as cooking fuel (Government of India, 2011b). In Katuyanur, all households have gas facilities, as the government provided each household with a kitchen stove and gas cylinder. The first cylinder was free, but refills are not and not every household can always afford the required Rs.800 for a new cylinder. Therefore, households rely on access to the forest to collect firewood, especially Malayali households from the ST hamlet. Household with access to arable land cook on firewood less often, and if they do, they use branches and dried coconut tree leaves from their own trees rather than wood collected from the forest. Firewood is mostly used for heating water since cooking on firewood takes longer compared to cooking on gas. A Malayali woman with two teenage sons cooks on gas whenever she has to cook quickly, mostly when she has work outside the home, or when her sons go to school. If she has more time for cooking, she uses firewood to save money. A few households cook on an electric hot plate or receive kerosene through PDS, depending on the category of PDS smartcard, although this is not enough to last an entire month. To save money, households alternate between cooking on gas and on firewood. Cooking on firewood is a sustainable method to save money, although the smoke can affect the cook's health, but relies on continued access to forests for collecting firewood. Even though firewood has reduced in importance, women still collect firewood up to twice a week. In small groups, women leave mid-morning and return some four hours later balancing bundles of wood on their heads. Before gas was widely used for cooking at home, villagers collected firewood from the forest to sell. Nowadays there is no market for firewood in the area, thus villagers now only collect firewood for their own household.

Household food security, or sufficient command over food, thus not only relies on the availability of food in the area or the income to buy food, but also relies on the additional factors and endowments of access to healthcare, access to sanitation, access to clean drinking water, access to electricity, and access to fuel for cooking. Katuyanur's households, especially Malayali households without access to arable land, reduce spending income on cooking fuel by alternating between gas and firewood. For access to clean water for drinking and cooking Katuyanur's households rely on groundwater, either from private wells or the Panchayat bore-well, although pumping groundwater to the surface requires a reliable electricity connection, which is a problem, and in dry seasons with low groundwater levels, the risk of water shortage

increases. Water shortage results in households being forced to buy water, which directly affects household food security as the required funds come from the household's budget for food. The allocation of household income will be discussed in-depth in Chapter 8.

6.4 Stability

The fourth pillar of food security is stability, which refers to the impact of economic, seasonal, and ecological factors on access to adequate food at present and in the future (FAO, 2006). Food stability means not being affected by economic or ecological shocks, and year-round food security. Although command over food can fluctuate throughout the year based on the season and moment in cultivation cycle, stability would mean that excess in command over food during productive periods can make up for the shortage of command over food in less productive periods. Hence, stability in food security is influenced by agricultural-market stability, ecological stability, and livelihood stability.

Ecological stability includes adequate and predictable rainfall and is an important aspect of food security for most villagers. The usually empty roof terrace of Rani's house had transformed into a space to sun-dry *ragi*, which was spread out in large circles. Rani's neighbours had left these circles of *ragi* to prepare for a *puja* to propitiate the gods for good rains. On the day of the *puja*, a group of women, including Gayatri, used the sun-dried *ragi* to grind it into a flour and prepare *kali* and *koozh*. In the afternoon Gayatri came by the house and invited me to join her at the village temple where the *puja* was about to start. We walked to the temple where the village children had gathered. Two men were playing drums and two other men had just started the *puja* in the smaller of the temple's two buildings. Nine women had gathered around the two men performing the *puja* and prayed to the deities in the temple. Soon more women and a few men gathered. The two drum players increased the tempo of the rhythm, playing as loudly as possible, and children loudly rang the bells hanging inside the bigger temple building. When the *puja* was over, chaos arose as one pot of *koozh* needed to be brought to the fields where three people should cry while begging for a *koozh* serving. Their tears would please the gods, who would transform the tears into rain. Everyone followed an elderly woman who carried the pot of *koozh* to the edge of the village where the children pretended to cry and beg for a spoonful of *koozh*. The elderly woman not only poured *koozh* into their cupped hands but also touched their foreheads with the spoon, covering their hair with the thick *koozh* and resulting in shrieks and laughter from the children and the observing adults. One man who had performed the *puja* declared three people still needed to cry. After some discussion, a group of elderly women formed a double circle hugging each other with hanging head and started humming a sorrowful song. The people surrounding the hugging group started laughing and soon the group of elderly women also broke out in laughter, breaking up their circle. In the end, the only tears that may have shed were from laughter. Nevertheless, in the evening it started raining. The villagers in this narrative were all Malayalis from the ST hamlet, most of whom without access to arable land. This shows that predictability and stability

of seasonal rainfall, and ecological stability in general, is not only of high importance to farmers but also to households without access to arable land.

Marginal and small landholdings in Katuyanur are rain-fed or depend on rainfall to increase groundwater levels in open-wells and bore-wells. Just like the farmers in Finnis' (2006) study, farmers in Katuyanur grow crops year-round according to season and make their farming decisions based on predicted rainfall patterns, and better rainfall is associated with better crop yields. Paddy, the staple food in the village, is only cultivated by three farmers. Six other farmers used to cultivate it yearly but had to stop due to lack of water. Data from the Agriculture Census Division shows that in Omalur sub-district, in which Katuyanur is located, paddy cultivation had reduced from 4527 holdings in 1995-6 (2062 hectares) to 3431 holdings in 2010-11 (1480 hectares). Ecological instability hits farmers hard as their crops wither with too much or too little rain. Ambika enjoys working in agriculture, but the current deplorable state of their land resulting from water shortage makes her feel disheartened. Another MBC marginal farmer has nothing to be happy about: "there is no water in the well, there is no rain; everything is barren. Things are hard." The last two years rains were unpredictable with less frequent and less heavy rains. In thirty years, Kumar had not seen a drought like in the last two years. Much of his land now lies fallow because there is not enough water to irrigate crops. Crops such as millets and pulses, which farmers cultivate for their own consumption, are vulnerable to changes in rainfall. Prema recalled they could cultivate anything when they first cultivated in Katuyanur, almost twenty years ago. Nowadays, however, many crops such as paddy, groundnut, turmeric, and cassava do not grow well because of lack of water, and especially the inability to cultivate paddy affects food consumption in Prema's household, since the only crops they grow now are commercial crops they do not consume themselves. Prema thinks if the seasonal rains would arrive like before, she can grow any crop again. Indeed, government data shows that since 2001, annual rainfall has been unpredictable. Figure 6.1 shows the annual observed rainfall in Salem District between 1951 and 2013 and clearly shows the yearly fluctuations in annual rainfall with a relatively stable period of an annual rainfall around 900mm between 1983 and 2000 and a severe drought between 2001 and 2004.

Furthermore, data from the TamilNadu Water Supply and Drainage Board (TWAD) shows that normal rainfall in Salem District is 997.9mm annually (TWAD, 2018). However, Figure 6.1 and Table 6.1 show that between 2012 and 2018, annual rainfall was well below this 997.9mm except for the years 2015 and 2017, which had annual rainfall slightly above average. This data thus corresponds with my informants' experiences of unpredictable and reduced rainfall, although Kumar must either have forgotten about the drought between 2001 and 2004 or Katuyanur had not been hit as much by this drought as other areas in Salem District.

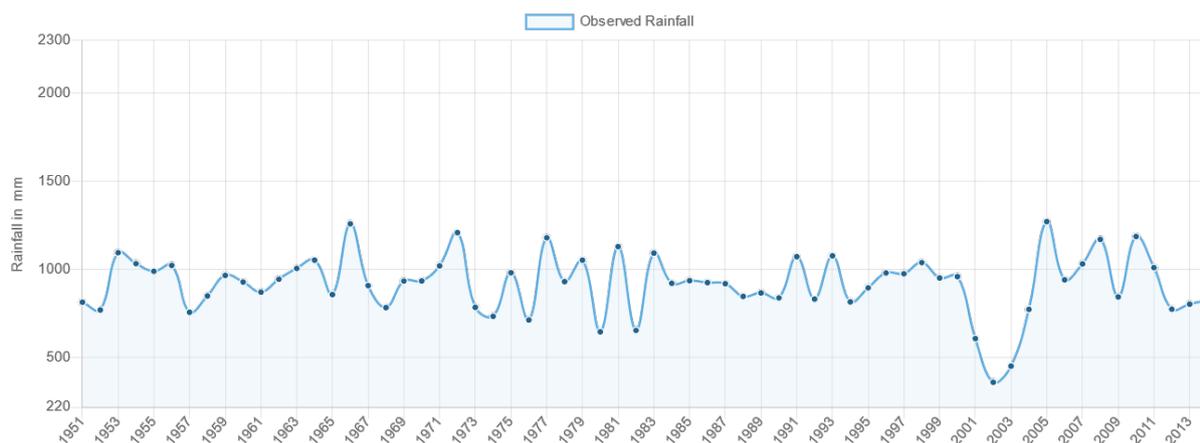


Figure 6.1. Annual Observed Rainfall in mm in Salem District (Government of Tamil Nadu, 2014).

Year	2013	2014	2015	2016	2017	2018
Rainfall (mm)	830.8	857.7	1135.5	577.5	1006.5	712.9

Table 6.1. Annual Rainfall in mm in Salem District (TWAD 2018).

Not only rainfall is crucial for cultivation, but so are groundwater levels, which farmers also rely upon for irrigating their fields. However, many farmers in Katuyanur frequently are unable to pump up groundwater as the levels drop too low and their bore-well is not deep enough to reach those low groundwater levels. Cultivating water-intensive crops like paddy and sugarcane is therefore now largely restricted to farmers with deep bore-wells. TWAD (2018) categorised groundwater in Katuyanur’s Panchayat village Kadayampatti as over exploited since 2013. Since 1991, post-monsoon average groundwater level is 11m below ground and pre-monsoon average groundwater level is 14.4m below ground (TWAD 2018). Table 6.2 shows that during this study, groundwater levels were about 1m higher than this average in 2018, but in 2019 this situation was completely different, specifically post-monsoon levels were extremely low. As this data is based on 41 TWAD observation wells throughout Salem District, local circumstances may deviate from the reported data.

	2013	2014	2015	2016	2017	2018	2019
Post-Monsoon (January)	10.6	9.5	11.05	7.09	14.52	9.9	24.4
Pre-Monsoon (May)	18.11	17.99	11.47	11.27	25.7	13	15.1

Table 6.2. Ground Water Levels in m in Salem District (TWAD 2018).

Farmers are not the only ones in the village affected by unpredictable rainfall and low groundwater levels. Vijay currently grows nothing in his land because he does not have irrigation facilities and there have been no rains. He also works as an agricultural wage labourer, but since many local cultivators are facing shortage of water, he does not have agricultural wage labour at the moment either. Vijay’s example

illustrates that unpredictable rains and absent seasonal rains affect not only farmers but also agricultural wage labourers. Lack of work and the unreliability of the agricultural sector in combination with increasing household expenses resulted in households diversifying their livelihoods as household members look for better earning and more stable job opportunities, which will be discussed in-depth in section 7.2. While the younger generation has better access to higher education compared to their parents, this does not imply the entire younger generation attends college, nor does it imply that all educated villagers will move out of the agricultural sector. Finding employment in non-agricultural sectors is challenging as it requires moving away from the village to towns and cities where the cost of living is much higher compared to the village. Pandi is one such example. As an engineering graduate, Pandi worked outside the village for a while, but the expenses for rent and food meant he could barely save money, so he came home and started farming instead. Although he wishes he could get a well-paid non-agricultural job nearby and commute from home, leaving the farming to his mother.

Ecological stability refers not only to predictability of sufficient rainfall but also on soil quality and fertility. Soil fertility in and around Katuyanur is affected by increased chemical use in the fields. A young ST farmer expressed an observation common among villagers, that every farmer now uses chemicals on their crops while years before farmers only used manure from their livestock to fertilise fields. She argued the heavy chemical use has affected the productivity of the fields. The experiences of these farmers are in line with the evidence Palani *et al.* (2021) found in a different Tamil Nadu district, that soil fertility is steadily declining, partly due to inaccurate use of fertilisers and chemicals. When the family of another farmer, an MBC big farmer, arrived in the village after they bought the land, the soil was very fertile, and they could cultivate anything. Now, they have difficulty growing crops such as corn and millets, since they require healthy and fertile soil and plenty of water. Pandi thinks the older generation of farmers will not experiment with cultivation, such as trying organic farming, because that generation only does what they know. He argued it will take years before the soil can grow anything without chemical use, and thus only younger generations, and only those with enough land, may be interested in cultivating new crops. This important aspect of willingness to experiment in agriculture was also argued by Finnis (2006), who observed in the Kolli Hills in Tamil Nadu that changes in cropping towards commercial crops highly depended on farmers' willingness to experiment. Pandi suggested it would be helpful if the government supported people to return to organic farming, for example through introducing schemes. The increasing ecological instability thus requires innovation and experimentation in farming to increase the sustainability of farming as a livelihood.

Ecological instability also affects livelihoods based on animal husbandry and pastoralism. Water shortages and reduced rainfall lead to insufficient drinking water for livestock and reduced availability of natural fodder, both of which result in inability to keep large herds, less healthy livestock, and decreased

milk production and milk quality. Ecological instability in rural areas thus directly leads to livelihood instability of all households involved in agriculture, animal husbandry, and pastoralism.

Agricultural-market stability is crucial for a sustainable livelihood for farmers, as well as for agricultural wage labourers since the latter depend on cultivators for labour opportunities. Farming is a high-risk livelihood, especially with crops such as vegetables, because vegetables are only suitable for sale for a few days. If market prices are low, farmers cannot delay the sale long as that would result in rotting vegetables and the farmer earning nothing. But even for other crops, market rates are unpredictable. Pandi explained that good earnings this year guarantee nothing for the following year. Farmers feel life has become increasingly expensive as necessities such as gas, bus tickets, sugar, oil, and dhal increased in price while the farmer's agricultural products have not. Kumar stated that when his father was farming, around 10 years ago, agriculture was profitable, and they could comfortably live from that income alone. Now that Kumar has inherited his father's arable land and occupation, agriculture does not give much income and farmers depend on loans for investments as agricultural returns are insufficient to make any investments in the farm and in the cultivation. Prices for required agricultural inputs, such as fertilisers and pesticides, are increasing while the market prices for farmers' crops remain low. Vijay argued that the combination of costs for labourers, low market rates, and shortage of water makes it useless to cultivate crops. Two farmers were very pessimistic about the future of agriculture and thus the future of their livelihood. One of them even feared that he may end up in a situation that forces him to take a 'tablet instead of rice' as his agricultural investments are not providing any return. Many farmers say the free market is a problem. They argue if the government would be more involved in keeping prices stable, in fixing prices, or in buying farm products through the government society for food procurement, farmers would fare much better. Kumar claimed an important reason their crops do not sell for satisfying prices is because of adulteration of products. Especially for products such as jaggery and cassava, mills mix products of inferior quality or artificial products with pure products, and as a result, high-quality products farmers produce decrease in market value. Farmers claim the middlemen are the only ones in the agricultural sector who are making any profits since agricultural products in the shops are expensive.

Exchanging work in the agricultural sector for employment in the non-agricultural sector is difficult for farmers. Despite willingness to leave farming behind, farmers' skills have little relevance in non-agricultural sectors. Their education is generally low; the majority of my farming informants, men as well as women, were either illiterate or did not study beyond primary school. Farmers lack the capital to start a business and relocating for unskilled, low-wage employment would not provide enough income to maintain an entire household since life in urban areas is far more expensive compared to village life. Farmers predict they would struggle more in non-agricultural employment in an urban area compared to persisting with farming in the village. Besides the economic factors, farmers reject the possibility of a good

life outside the village, as according to them, urban areas are too polluted in terms of water, air, streets, and noise, which will only lead to disease.

Work in agriculture, for farmers as well as agricultural wage labourers, is thus an insecure livelihood with work availability becoming increasingly unpredictable while life becomes more expensive. Ecological instability and market instability result in livelihood instability, affecting the food security of agricultural households. Farmers and agricultural wage labourers are crucial for food production, not only for their own households, but also for non-agricultural households in urban areas. However, agricultural households face more instability in command over food compared to non-agricultural households, for whom farmers and agricultural wage labourers produce the food. Household food security as entitlement therefore depends on ecological, market, and livelihood stability; external factors that farmers and agricultural wage labourers cannot influence while they directly influence their household's ability to obtain sufficient command over food and thus their household's food security.

6.5 Conclusion

This chapter focussed on household food security, which represents a scale between severely food insecure and food secure. Food insecurity results from entitlement failure, or insufficient command over food through exchange entitlements. I investigated household food security from the view of informants' perceptions, experiences, behaviours, and preferences. The four pillars of food security, i.e. availability, accessibility, utility, and stability, were used to frame household food security in Katuyanur and to show the requirements for obtaining sufficient command over food. Mitra (2014) argued that food security continues to be a problem for Indian households, and the findings presented in this chapter indeed suggests that the majority (67%) of households in the study area struggle to command sufficient quantity, quality, and diversity of foods.

Of all four pillars, I found only food availability sufficient in the area. Food is available at the local shop and in shops and markets in nearby towns. The increased cultivation of paddy and the introduction of rice in local diet has particularly influenced food availability. If households do not have enough food at home, food unavailability is never the reason. Hunger and starvation do not occur in Katuyanur, largely because of the food rations provided by the government through PDS. These food rations, or transfer entitlements, help households in managing their food consumption when they cannot obtain enough food through the market. At the same time, households who heavily depend on PDS for their daily food intake lack variation and nutrition in diet as the only staple food provided through PDS is rice.

Problems in food accessibility are the main cause for households being food insecure. While households rarely eat insufficient quantities of food, hunger and starvation are absent, few households can access preferred and nutritious foods leading to a healthy and diverse diet. Particularly the lack of vegetables in local diets and the lack of variety in meals stood out as reasons for food insecurity. While all households in this study lack sufficient access to food, the households found to be most vulnerable are

households who depend on agricultural wage labour for their livelihoods. These households are Malayali households who either have no access to arable land or who are marginal farmers. Small and big farmers and households whose main livelihood is non-agricultural do better in terms of accessibility of food. This finding supports the claim by Rao, Pradhan and Roy (2017) that the unsustainability of the agricultural sector is expressed in men's search for non-agricultural livelihoods. However, unlike the findings by Rao, Pradhan and Roy (2017), men in Katuyanur do not seek to migrate to urban areas but commute or take up driving jobs. The impact of unsustainable agricultural livelihoods is clear in villagers' perceptions, behavioural responses, and livelihood strategies aimed to increase household income. Households have three main coping strategies to manage food consumption in times of lacking income; to *compromise on the quality of food*, to *compromise of dietary variety*, and *getting loans or borrow money to buy food*. The last strategy is particularly dangerous as it results in a downward spiral piling up debts. The NFSA, as discussed in section 3.5.1, focusses solely on distribution of food, not on increasing households' purchasing power or making food affordable. The NFSA thus does not provide households with any more opportunities to choose their diet, nor to eat according to food preferences.

Pritchard *et al.* (2014) had argued that food security in India is a problem of livelihoods. The evidence presented in this chapter largely supports this argument, as for most households, command over food directly ensues from access to income. Farmers no longer rely on self-production for food; cultivation is a source of income with which they buy food and other services and commodities. Household food security in Katuyanur is thus an issue of income, which is directly derived from their asset and own-labour endowments. Reliance on income for command over food for households without access to arable land as well as households with access to arable land, does not mean they have equal command over food. Differences in livelihood options between households are crucial as these relate to different entitlement relations. These findings support Sen's (1985) argument that insufficient command over food is an 'acquisition problem'. However, the relationship between endowments, or what is owned, and food entitlements is much more complex than the entitlement approach suggests, as additional factors and endowments play a crucial and interlinked role in households' ability to command food. Based on the literature, the expected indicators for vulnerability to household food insecurity included poverty, patterns of landholding and land quality, sociocultural, legal, and structural factors (Sharma, 2019), ST and SC households (Gillespie, Harris and Kadiyala, 2012), lack of labour demands, multiple labour engagements, time constraints (Stevano, 2019), and patterns in access to land (Muraoka, Jin and Jayne, 2018; Pallas, 2011). The evidence presented in this chapter showed that the most important endowments and factors related to vulnerability to food insecurity were access to land, source of livelihood, caste, and ecological, market, and livelihood stability. Caste largely overlaps with access to land and source of livelihood, as only among ST households there is a substantial number of households without access to land and nearly all agricultural wage labourers are from ST households. The links between caste and vulnerability to food

insecurity are thus ascribed to the overlap between caste, source of livelihood, and access to land, rather than caste alone.

The pillar of utility plays a relatively small role in households' food insecurity as healthcare services are not far, clean drinking water is available almost year-round, and villagers can get firewood from the Katuyanur Reserved Forest if they are unable to buy cooking fuel such as gas or kerosene. Lack of sanitation is an issue for some households, particularly for those living in the old part of the ST hamlet where there is no space to construct private bathrooms. These factors of access to healthcare, access to sanitation, access to clean drinking water, access to electricity, and access to fuel for cooking thus represent additional factors and endowments that are prerequisites for household food security. As even if household income is enough to buy all the food that a household needs, without these additional factors and endowments, entitlement failure nevertheless occurs.

Problems in food accessibility closely relate to issues in stability. Instability of agricultural livelihoods, because of ecological instability and declining agricultural commodity prices, has resulted in insufficient accessibility of food to agricultural households. Farmers would be more self-sufficient for food if water scarcity was not an issue, as many farmers stopped cultivating paddy because of lack of water. However, these important variables of stability are all external factors beyond the influence of these agricultural households.

PDS rice availability and various coping strategies ensure hunger and starvation is not present in the village, but that does not mean households are food secure and that entitlement failure is uncommon. Household incomes, especially for agricultural wage labourers, are inadequate to achieve household food security. The entitlement approach to analyse command over food is not without problems. Expenses fluctuate while endowments generally do not. Food security is therefore also about choices and making priorities. Devereux (1993) argued that a decision to sell or keep assets when coping with food insecurity depends on an assessment between "an asset's current 'entitlement value', on the one hand, and its impact on 'future entitlement', on the other" (Devereux, 1993, p.56). The entitlement approach should thus consider the possibility of households having a positive long-term outlook, while still struggling with an insufficient entitlement set to secure a sufficient command over food today. Increasing food security is not always households' priority; people rather invest in housing, education, mobile phones, motorbikes, and televisions, which all still have some benefit (status, work opportunities, etc.), rather than in having a more varied or nutritious diet. Command over food thus not only relies on the endowments available to a household but also depends on the non-food expenses. In times of increased expenses, food is one of the first expenses on which households try to cut costs, rather selling moveable assets. The entitlement approach does not consider people as active beings who continuously make choices. Instead, the entitlement approach represents a theoretical possibility for exchange entitlement sets to result in command over food. It does not consider people's choices, behavioural responses, and strategies that

influence command over food, irrespective of their endowments. However, the entitlement approach was introduced by Sen as he was concerned with famine, not food security. The difference in emergency of immediate threat to well-being between famine and food insecurity may be an important aspect in considerations on how much weight to give the role of choice in the entitlement approach.

Chapter 7 - Linking Access to Land to Command over Food

In the entitlement approach, command over food depends on the endowments a household can utilise to obtain food entitlements. For agricultural households, two of the four entitlement relations identified by Sen (1981) are particularly relevant for command over food; production-based entitlements and own-labour entitlements. In this chapter I investigate how households use these two entitlement relations to obtain command over food and argue that additional factors and endowments as well as social variables are crucial in households' ability to derive command over food from access to land and own-labour. Some additional factors and endowments in command over food were already discussed in section 6.3 in relation to food security's pillar of utility: access to healthcare, access to sanitation, access to clean drinking water, access to electricity, and access to fuel for cooking. In this chapter, I make an argument for considering the importance of the additional factors and endowments of land size, access to irrigation facilities, access to credit, and access to labour opportunities in any analysis of households' ability to obtain command over food including the social variables interwoven with these additional factors and endowments.

In section 6.2 I argued that food accessibility is linked to two main factors: access to land and source of livelihood. The evidence presented in section 6.2 revealed that severe food insecurity was more prevalent among households without access to arable land compared to households with access to arable land. However, not all households with access to land are food secure, nor are all households without access to land food insecure. The number of comprehensive studies focussing on the various links between land and food are only few (Holden and Ghebru, 2016; Maxwell and Wiebe, 1999; Muraoka, Jin and Jayne, 2018), and thus this chapter will contribute to better understand the links.

Links between land tenure and food security, as well as between livelihood and food security, depend on several important variables. Indeed, Leach, Mearns and Scoones (1999) had recognised in their extended entitlement approach that additional endowments such as labour and capital are often required to derive entitlements from endowments. In terms of access to land, this chapter finds that land size and working irrigation facilities are important variables for food accessibility. Additionally, the literature suggests that tenure security is an important variable in household food security. Meinzen-Dick *et al.* (1997), for example, argue that security of continued access to land is important for food security as security strengthens concern for the quality and quantity of future production and stimulates sustainable investments and land maintenance. Devereux's (1996) concept of the 'fuzziness' of property relations thus might also be critical for an understanding of household food security. In terms of source of livelihood, section 6.2 showed that households with non-agricultural incomes and farmers did not differ substantially in terms of vulnerability to food insecurity, while agricultural wage labourers were most vulnerable for household food insecurity. Therefore, this chapter will focus on the links between access to land and

command over food by E-mapping the connections between access to land and food security and main source of livelihood and food security.

Households without access to arable land only have their labour to sell, while households with access to arable land can command food through production-based entitlements as well as own-labour entitlements. As can be recalled from section 2.4.1, a household's (or individual's) total set of all possible opportunities for command over food is referred to as the entitlement set (Osmani, 1993; Ribot, 2014). Households with access to land would thus have a greater exchange entitlement set compared to landless households. A Household's entitlement set can only change when there is a shift in their endowments or in E-mapping (Dreze and Sen, 1989; Osmani, 1993), however, in this chapter I argue that a household's exchange entitlement set for command over food depends on the combination several endowments and on social variables. Farmers may be able to utilise their own-labour entitlements as back-up when production-based entitlements do not lead to sufficient command over food, i.e. when relying on production-based entitlements alone would result in entitlement failure (Osmani, 1993), but time restraints make simultaneous utilisation of the two entitlement relations impossible. Furthermore, non-agricultural employment has a greater potential for command over food for men than agricultural wage labour, but for women non-agricultural employment is inaccessible and therefore access to land would have a greater contribution to women's command over food compared to an own-labour entitlement relation. The gendered division of labour causes great discrepancies between men and women in their respective opportunities to translate their own-labour endowments into command over food. Therefore, not every household with access to arable land is better off in terms of command over food compared to households without access to arable land.

This chapter starts with an investigation into the links between production-based entitlements and households' command over food. Here I examine how households can utilise their access to arable land to gain command over food, focussing specifically on the variables of land size, irrigation facilities, and tenure security. Production-based entitlements are not only derived from arable land, but also from animal husbandry and pastoralism. The links between animal husbandry and pastoralism and command over food will therefore also undergo E-mapping in this chapter. As the findings in section 6.2 showed that access to land does not guarantee household food security, but that main source of income is at least as important, the final section of this chapter discusses the role of own-labour entitlements in household's command over food, which includes a brief discussion on hunting and gathering.

7.1 Production-Based Entitlements

Arable land, as a place of food production and a place of income generation, is an important source for command over food through production-based entitlement relations. Every farmer depends on a good harvest and high market prices to buy household needs such as food. Access to arable land is important according to all my informants. Households with access to arable land do their utmost to preserve their

access, while households without access to arable land hope that one day they can buy land. Households without access to arable land believe they would fare better with access because land offers an opportunity to cultivate food for their own consumption. Sarada argued access to arable land improves a household's financial situation:

We would eat the same as now, but we will have land. If there is no work for 10 days or two months, we can work at our house and eat. [...] If we have land, we can cultivate food. If we go for work for 10 days and receive 200 rupees per day, we can save this money.

Her husband added: "Now what we earn we use to buy food." Access to arable land could take the strain off their food expenses, which is especially important in times of unemployment due to job scarcity or poor health. The impact on dietary diversity, however, depends on the household's allocation of the now 'extra' income, freed from their food budget. Household's income allocation will be discussed in detail in section 8.1.

Households with access to arable land perceive the benefits from cultivation in various ways, depending on whether they consider farming their main livelihood or an opportunity to complement other sources of income. Ambika explained that if her household's income would consist only of her husband's daily wages, they would just have enough money to buy food. Since they also have 1 acre of arable land, they can invest his wages in cultivation and increase their total income. Kumar, who works as a bus driver to supplement his household's farming income, had a different view on the economic opportunities of farming compared to wage labour:

[With] agricultural wage labour, you can make profit. Land does not give benefits. If we make 100 rupees, we need to spend 200 [rupees]. There is no benefit. To eat we use rice, but if we buy from outside, we cannot manage it, so we cultivate it ourselves. Therefore, the wage labourers make more money by working in the fields.

These two perceptions demonstrate that for one person, access to arable land implies increased economic opportunities, but for another, cultivation is necessary to survive. While the first farmer considers income made from cultivation as complementary to earned wages, the second considers the unsustainability of farming, which requires other paid work to complement household income.

On its own, land cannot bring about any exchange entitlements; investments of labour and resources are required. Meinzen-Dick *et al.* (1997) emphasise the importance to consider the needs related to landownership to allow effective use of the land, since cultivation requires investment and thus access to cash and credit, participation in (irrigation) committees, and/or (political) connections. Therefore, other important variables, including land size, irrigation facilities, and tenure security, will be explored in the following sections.

7.1.1 Land Size

The relation between access to arable land and command over food is not straightforward; section 6.2 showed that not every household with access to arable land has equal command over food through production. The size of arable land plays an important role in how much command over food a household can obtain. Unsurprisingly, Table 7.1 shows that for the interviewed households, the greater the land size category a household has access to, the greater the likelihood of household food security. However, a somewhat unexpected outcome shows that households without access to arable land are in a slightly better position compared to marginal farmers. This finding problematises the argument by Doss, Summerfield and Tsikata (2014); that marginal lands are often an important source for livelihood activities. The discussion in section 7.2 will problematise this argument further as marginal farmers are found to be short in time to combine their farming activities with other income generating activities.

Household	HFIAS Category	Caste	Access to Arable Land - Size Category
1	Food secure	BC	Small
2	Food secure	BC	Big
5	Food secure	MBC	Big
3	Food secure	MBC	Marginal
17	Food secure	ST	-
19	Food secure	ST	-
15	Mildly food insecure	ST	-
6	Moderately food insecure	MBC	Marginal
7	Moderately food insecure	ST	Small
10	Moderately food insecure	ST	Small
12	Moderately food insecure	ST	Marginal
11	Moderately food insecure	ST	Marginal
13	Moderately food insecure	ST	-
16	Moderately food insecure	ST	-
18	Moderately food insecure	ST	-
20	Moderately food insecure	ST	-
4	Severely food insecure	MBC	Marginal
8	Severely food insecure	ST	Marginal
9	Severely food insecure	ST	Marginal
14	Severely food insecure	ST	-

Table 7.1. HFIAS Categories among Interviewed Households and Land Size Category

The data on landownership in Katuayanur collected through the household survey shows a similar pattern that increased land size results in decreased vulnerability to food insecurity, with barely any difference between marginal landowners and landless households in terms of vulnerability to food insecurity (see Table 7.2). Focussing on the links between HFIAS category and caste and landownership, Table 7.2 shows that the BC and ST households follow the general pattern of the bigger the land size the more likely the household is food secure. For MBC and SC households this pattern, or any other, cannot be observed. Seven marginal landowners in the survey reported they were food secure. The ST household

consists of six members: two parents, their son, their daughter-in-law, and two young granddaughters. The son and daughter-in-law are both college graduates and have employment outside the home. Although their income from this employment is not reported in the survey, this might suggest their main source of income is from their employment rather than from the farm. Similarly, among the six MBC households who own only marginal landholdings but are food secure, in four of them there is at least one household member with fulltime employment outside the home, although not all with college degrees.

		Food Secure	Mildly Food Insecure	Moderately Food Insecure	Severely Food Insecure
Caste	BC	6	0	1	1
	MBC	11	3	4	9
	SC	1	0	1	3
	ST	15	4	15	29
Landownership - Size Category	None	11	4	11	20
	Marginal	7	3	4	15
	Small	8	0	5	5
	Big	7	0	1	2
Landownership BC	None	0	0	1	0
	Marginal	0	0	0	1
	Small	3	0	0	0
	Big	3	0	0	0
Landownership MBC	None	1	1	2	1
	Marginal	6	2	1	5
	Small	3	0	1	1
	Big	1	0	0	2
Landownership SC	None	1	0	0	1
	Marginal	0	0	0	1
	Small	0	0	0	1
	Big	0	0	1	0
Landownership ST	None	9	3	8	18
	Marginal	1	1	3	8
	Small	2	0	4	3
	Big	3	0	0	0

Table 7.2. HFIAS Categories for Caste and Landownership among Surveyed Households

Among farmers, big farmers are thus more likely to be food secure, while marginal farmers are more likely to be severely food insecure. If adjusting a household's land according to number of household members, the household survey data shows that the average land size per household member for food secure households is 1.34 acres, for mild and moderately food insecure households 0.50 acres, and for severely food insecure households 0.55 acres (or 0.82 acres when one outlier of a severely food insecure three-member household with 20 acres is included). Thus, while the difference between the various food insecure households is small, the difference between food insecure households (0.53 acres per household member) and food secure households (1.34 acres per household member) is substantial. Farmers argued

they need at least of 2.5 acres of irrigated land to live of agriculture alone, which corresponds to the government’s official lower limit of being a big farmer with wetland. However, the majority of the farming households in Katuyanur fall in the categories of marginal or small farmers, most of whom only have dryland. Among the 12 interviewed informants, there were 7 marginal farmers, 3 small farmers, and 2 big farmers. Only three farming households, the two big farmers (1 MBC, 1 BC) and one small farmer (ST), depended on farming alone for their livelihood (but also keep livestock). The other farmers needed additional incomes, mainly by selling their labour. Among the 57 farming households who participated in the household survey, 29 were marginal farmers, 18 small farmers, and only 10 big farmers. This suggests that almost 83% of the farmers in Katuyanur have insufficient land sizes to make a livelihood based on farming alone. Farmers who combine jobs stated they would concentrate on farming alone if they could get enough income from their land.

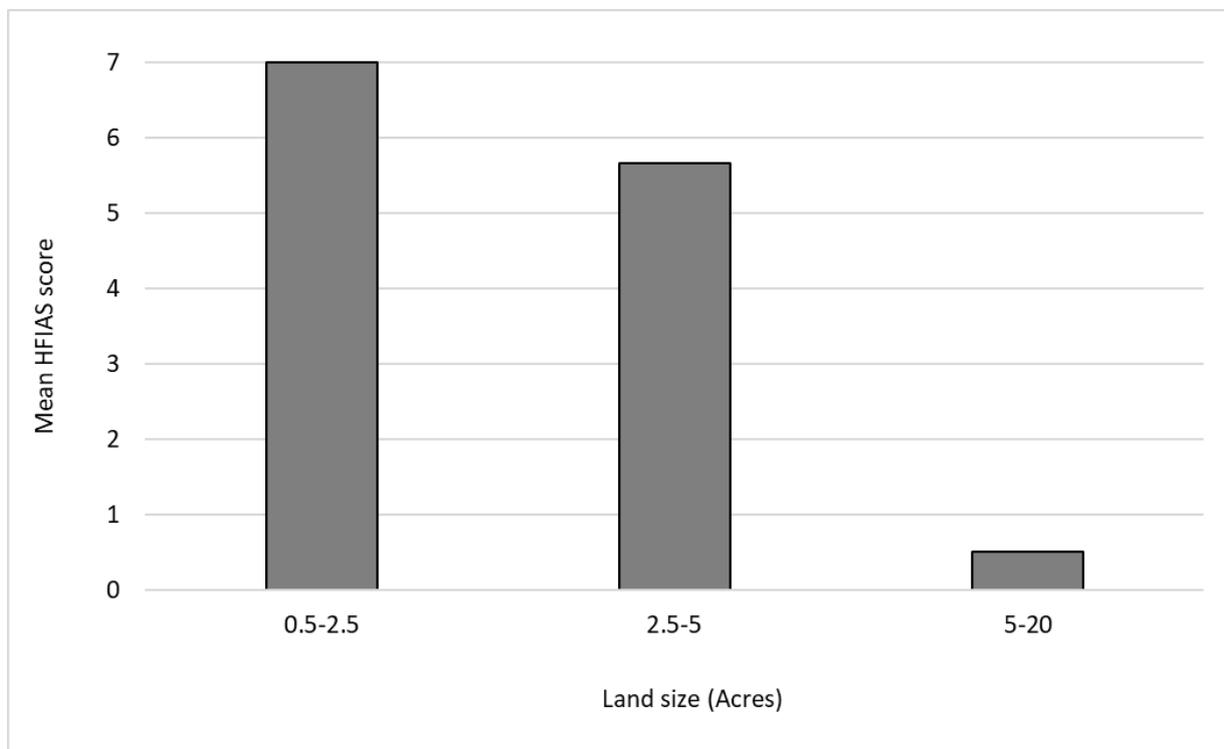


Figure 7.1. HFIAS Scores for Landowning Households in relation to Land Size

Indeed, analysing the survey data on links between land size and HFIAS score, Figure 7.1 shows that the mean HFIAS score for households with less than 2.5 acres land (marginal landholdings) is 7, while the average HFIAS score for households with land size between 2.5 and 5 acres (small landholdings) is slightly lower with 5.7, and households with land size 5 acres or more (big landholdings) have an average HFIAS score of only 0.5. Indeed, within this last category all households are food secure, except for one. This one outlier, a household owning 20 acres of land, consist of three members; a widow, her son, and her daughter-in-law, but the 20-acre land is actually shared with the widow’s brothers-in-law, and

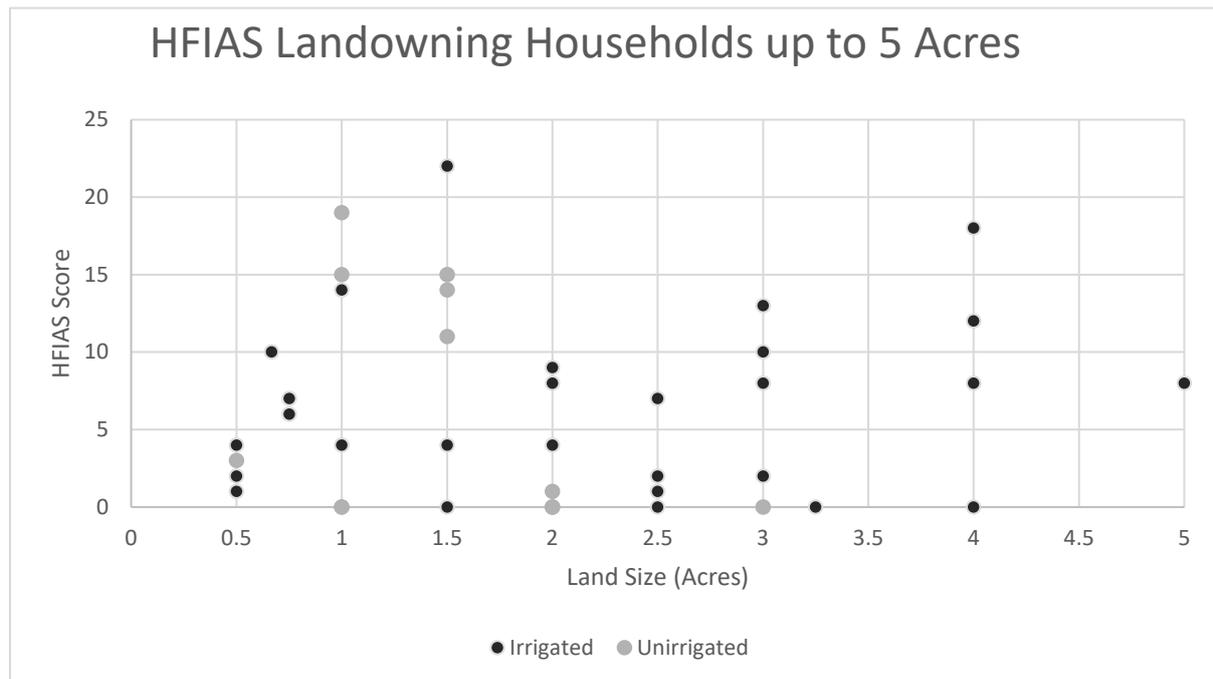


Figure 7.2. HFIAS Score for Landowning Households up to 5 Acres in relation to Land Size.

presumably their families. This means that the 20 acres of land actually supports more than one household and thus the effective land size this one household has access to is much smaller than the reported 20-acres.

Figure 7.2 zooms in at the households with 5 acres of land or less, as these include all the food insecure households. The households with land between 0.5 and 1.5 acres actually increase in food insecurity when land size increases. One explanation could be that the smaller the land size, the less these households rely on farming for a livelihood and spend more of their time and labour as wage labourers, resulting in higher income and greater food security. The households without irrigation on their lands would be expected to have greater food insecurity compared to households with the same land size but with irrigation facilities. However, Figure 7.2 only shows such an outcome for households with less than 1.5 acres, while above 1.5 acres the households with unirrigated lands unexpectedly are less food insecure compared to the households with irrigated lands. However, there are not enough unirrigated lands (only 13) to make a significant conclusion. Furthermore, irrigated refers to when the households own a well, not

if it is actually working. The importance of irrigation facilities for household food security will be discussed more elaborately in the next section.

7.1.2 Irrigation Facilities

Command over food through production depends on the choice of crops cultivated. Farmers cultivate certain crops, such as paddy and millets, only for their own consumption, contributing directly to the household's command over food, while they grow other crops, such as sugarcane and turmeric, for the market, contributing indirectly to command over food. A detailed overview of the crops commonly cultivated in Katuyanur for farmers' own use and for commercial use was given in section 3.6.1. The profits that can be made from commercial crops vary considerably, but not every farmer can simply decide to grow the crop for which the highest return will be expected. The main factor that guides farmers' choice of crops is water availability for irrigation. Not every farmer has access to irrigation facilities, although Table 7.3 and Table 7.4 show that most farming households within each community do have irrigation facilities within their land. However, as Momsen (2019) pointed out, access to agricultural inputs, like access to arable land, is highly gendered. Indeed, among the surveyed households, only two out of six landholdings owned by a woman have irrigation facilities.

Overall, Table 7.3 shows that among the 12 interviewed households with access to land, two ST households have no irrigation facilities and thus can only grow rain-fed crops, three households (2 ST, 1 MBC) have an open-well (although dry at the time of this study), and seven households (3 MBC, 2 ST, 2 BC) have a bore-well. At the time of my fieldwork, only the three largest landholdings (2 BC, 1 MBC) had a bore-well deep enough to reach groundwater. Although this sample is small, it suggests ST households depend most on rainfall for cultivation compared to farming households from other communities, and big farmers have better irrigation facilities compared to small and marginal farmers.

Household	HFIAS Category	Caste	Irrigation facilities
1	Food secure	BC	Open-well and bore-well
2	Food secure	BC	Bore-well and drip
5	Food secure	MBC	Bore-well
3	Food secure	MBC	Bore-well (no motor)
6	Moderately food insecure	MBC	Bore-well and drip (dry)
7	Moderately food insecure	ST	Open-well (dry)
10	Moderately food insecure	ST	Open-well (dry)
12	Moderately food insecure	ST	No
11	Moderately food insecure	ST	No
4	Severely food insecure	MBC	Open-well (dry)
8	Severely food insecure	ST	Bore-well (dry)
9	Severely food insecure	ST	Bore-well (almost dry)

Table 7.3. HFIAS Categories for Irrigation Facilities among Interviewed Households with Access to Land

However, data from the surveyed households (see Table 7.4) shows that among the 57 landowning households, 62.5% of BC households have irrigation facilities, compared to 65% of MBC households, 67% of SC household, and 78% of the ST households. While the survey data does not show whether these facilities are working, this suggests that the generally more vulnerable ST households are more likely than any other household to have irrigation facilities, which is not what one might expect.

HFIA Category	Irrigation BC		Irrigation MBC		Irrigation SC		Irrigation ST	
	yes	no	yes	no	yes	no	yes	no
Food Secure	5	1	4	5	0	1	4	0
Mildly Food Insecure	0	0	2	1	0	0	0	1
Moderately Food Insecure	0	1	3	0	0	0	7	0
Severely Food Insecure	0	1	6	2	2	0	7	4
All	5	3	15	8	2	1	18	5

Table 7.4. HFIA Categories for Caste and Irrigation Facilities among Surveyed Households

Access to working irrigation facilities is crucial for household food security, as Table 7.3 also shows that all food secure households, except one, have working irrigation facilities. Again, Table 7.4 paints a slightly different picture as only 33% of households with irrigation are food secure compared to 41% of households without irrigation, thus suggesting that food security does not depend on irrigation facilities. Here the difference may also be explained by lack of data on whether the irrigation facilities among the surveyed households are working as well as by the fact that the majority of farmers are marginal and small farmers, as was seen in the previous section. However, when focussing on severe food insecurity, 37.5% of households with irrigation facilities are severely food insecure compared to 41% of households without any irrigation facilities. Although the difference is small, it does suggest severe food insecurity is more likely among landowners without access to irrigation facilities.

7.1.3 Tenure Security

Several studies suggest that tenure security is an important facet of the contribution of land to household food security. Santos *et al.* (2014) argued that tenure security over land contributes to long-term household food security and Muraoka, Jin and Jayne (2018) had found that in Africa, productivity on rented lands was lower than productivity on owned lands. While none of the farmers included in this study rented land, it is possible to compare household food security of households who own their arable land with households who access their arable land otherwise. In section 5.4.3, various arrangement for access to privately owned arable land were discussed. The most common arrangements included the unregistered division of arable land as early inheritance, unregistered division of arable land among heirs after the landowner is deceased, and access to arable land through relatives.

Table 7.5 shows the 12 interviewed households with access to arable land and among those households who own their land, i.e., have the *patta* within their household, half are food secure, while among those households who do not own their land only one out of six is food secure. However, as Table

7.5 also shows, all the households who do not own their land, except for the one who is food secure, are marginal landowners. Thus, the greater likelihood of food insecurity among these households may be due to the size of their land rather than to not owning their land. For the surveyed households, in Table 7.6, there is no evidence for a link between whether the *patta* is held by one of the household members and the HFIAS category. While access to land without *patta* does not always mean access is insecure, these findings do not support an argument that links tenure security to increased food security.

Household	Caste	HFIAS Category	<i>Patta</i> within household?	Access to Arable Land - Size Category
1	BC	Food secure	Yes	Small
2	BC	Food secure	No: unofficial division	Big
5	MBC	Food secure	Yes	Big
3	MBC	Food secure	Yes	Marginal
6	MBC	Moderately food insecure	No: unofficial division	Marginal
7	ST	Moderately food insecure	Yes	Small
10	ST	Moderately food insecure	Yes	Small
12	ST	Moderately food insecure	No: access through relatives	Marginal
11	ST	Moderately food insecure	No: unofficial division	Marginal
4	MBC	Severely food insecure	No: unofficial division	Marginal
8	ST	Severely food insecure	Yes	Marginal
9	ST	Severely food insecure	No: unofficial division	Marginal

Table 7.5. HFIAS Categories and *Patta* among Interviewed Households with Access to Land

HFIAS category	<i>Patta</i> within household?	
	No	Yes
Food Secure	8	13
Mildly Food Insecure	1	2
Moderately Food Insecure	1	7
Severely Food Insecure	8	10

Table 7.6. HFIAS Categories and *Patta* among Surveyed Households with Access to Land.

Even though the previous findings do not provide any evidence of the direct role of tenure security in household food security, observations and interviews with villagers in Katuyanur do suggest tenure security contributes to household food security. Specifically, tenure security, as an arrangement of access to land with a specific bundle of rights that includes the right of alienation, is important in accessing funds to invest in farming. Few farmers in Katuyanur have enough private funds to invest in their farm. Farmers rely on loans to develop their land, buy machinery, and grow crops. Not every farmer is eligible for the same loans; eligibility depends on caste, land size, and the bundle of rights derived from the land. The Bank of India offers some agricultural loans only to farmers who own their land, while other agricultural loans

are also available to tenants or sharecroppers, but only if such an arrangement is registered^{2,3}. As discussed in section 5.4.3, the arable lands to which farmers in Katuyanur have access, are all privately owned with issued *pattas*, but the *patta* holder is not always the cultivator. Many banks and financial institutions require land as collateral for an agricultural loan, for example the irrigation loan the Bank of India offers⁴, which farmers can only give if they are the *patta* holder, since only landowners can alienate the land. Kumar and Anita have a Rs.8 lakh bank loan with their land *patta* (issued in Kumar's name) as collateral. They invested part of the loan in agriculture and used the rest for construction work in and around their house, for their daughter's marriage, and both their children's education. Kumar and Anita struggle to pay the monthly instalments and bank representatives repeatedly visit their farm to collect outstanding payments. If they default on their loan, the bank could seize their land. Farmers therefore prefer not to use their land *patta* as collateral for a loan and utilise other credit options.

Not all bank loans require land as collateral, for example, the Indian Bank and Axis Bank both offer agricultural loans with gold as collateral instead of land, although these banks still require proof of landownership as prerequisite for obtaining the loan as well as proof of crop cultivation^{5,6}. One ST household received a Rs.1 lakh agricultural loan from the Indian Bank based on an assessment of their cultivation potential rather than with their land as collateral. After they received the loan, inadequate rainfall caused low crop productivity and they now have difficulties in repaying the loan and interest. Bank representatives regularly show up at their farm to put pressure on them to pay their overdue instalments and threaten to file a complaint against them and take them to court if they fail to pay. These farmers fear they will need to sell their land if they cannot pay the overdue instalments. Thus, even though this farming household did not give their land as collateral for the loan, they could nevertheless be forced to sell it to pay off their debt.

The government's Agricultural Department offers agricultural credit schemes that do not require land as collateral but do require a farmer certificate issued by the local VAO. The Agricultural Department offers not only credit schemes, but a variety of agricultural benefits, subsidies, and schemes, such as subsidised installation of drip-irrigation, subsidised seeds, crop-insurance schemes, and subsidies for agricultural machinery. One such credit scheme targets farmers from ST communities. Under this scheme ST farmers can receive up to Rs.50 000 in interest-free credit. An elderly Malayali farmer took part in this scheme in 2017, and the Agricultural Department turned the entire loan into a gift. Agricultural schemes prioritise marginal and small farmers, ST and SC farmers, and women farmers. Farmers outside these

² <https://www.bankofindia.com/cropfinance>

³ <https://www.bankofindia.com/LandDevelopment>

⁴ <https://www.bankofindia.com/MinorIrrigation>

⁵ <https://indianbank.in/departments/agricultural-jewel-loan-scheme/#!>

⁶ <https://www.axisbank.com/agri-and-rural/loans/gold-loan/eligibility-documentations#menuTab>

groups can apply for agricultural schemes and subsidies, but for them the subsidies generally will not cover 100% of the cost.

Not every scheme is attractive to the priority groups. For example, two informants, both big farmers, received a government subsidy to install a network of pipes for drip-irrigation. As this scheme only covers the pipe network from water source to the land, this scheme is useless to farmers without access to a well, or whose well has run dry. Farmers with less developed lands, which section 7.1.2 found mostly to be marginal and small farmers, thus would not benefit from advanced agricultural schemes. Another scheme, introduced during my first month in Katuyanur, promoted *ragi* cultivation, a traditional crop grown in Katuyanur before irrigation facilities were introduced. In this scheme, farmers need to invest Rs.2000 in cultivation and in labourers' wages, while the Agricultural Department provides the required implements free of cost and after harvest the government deposits Rs.5000 in the farmer's bank account. *Ragi* cultivation is not profitable, so farmers consume the *ragi* they grow themselves. This *ragi* scheme is therefore not attractive to farmers who only have marginal landholdings; farmers who cannot spare an acre for the three months it takes to grow *ragi* instead of cultivating a commercial crop. For marginal farmers, participation in subsistence crops schemes is thus not attractive as it reduces their already meagre income.

As mentioned earlier, participating in any of these agricultural schemes requires a farmer certificate issued by the local VAO. However, this farmer certificate, despite the name, is not issued to all farmers, but only to landowning farmers, as the required documents for a farmer certificate include a "self-declaration by the Farmer for the lands owned by him/her" and the *patta* number of their land (Government of Tamil Nadu, 2016). The government thus not considers Devereaux' (2001) idea of the fuzziness of property relations, in which control over an endowment does not always equal control over the entitlement, and consequently the issuing of farmer certificates and accessibility of agricultural schemes is not inclusive as it does not cover farmers who do not own the land they cultivate.

This does not imply farmers who do not own arable land have no access to credit or agricultural schemes provided by the government at all. Farmers with access to land through one of the four arrangements of access to land for cultivation discussed in section 5.4.3, i.e., renting/leasing land, early inheritance, unregistered inheritance, and access through relatives, do have options to access credit or to participate in the government's agricultural schemes. Farmers who cultivate land obtained through early inheritance or unregistered inheritance can obtain a farmer certificate for the undivided land and then decide with each household with an unregistered share of the land, usually brother, how to distribute the credit or benefits among the households. However, farmers often choose to wait until they own the land to avoid arguments with brothers and avoid the risk of losing all brothers' land in case of defaulting on the loan. Vijay and his brothers separately cultivate shares of their mother's land. Vijay wishes to get a loan to start a nursery, but he is ineligible for a government loan based solely on his unregistered share of the

landholding. He must wait until he inherits the land and can have the *patta* issued in his name. Vijay could get a loan from a private financial institution or a bank, but he prefers not to because private institutions are notorious for forcing people into selling land if they cannot repay the loan. The land Pandi's household cultivates is registered in his deceased grandfather's name. Pandi cannot get a loan from the Agricultural Department until the land *patta* is issued in his name or on his mother's name. However, he can take part in the agricultural schemes the government offers, which he first discusses with his uncles as participation is based on their shared farmer certificate. Thus, farmers who cultivate an unregistered share of land must bargain with other shareholders, usually brothers, to arrange a division of benefits derived from schemes.

Farmers who lease or rent arable land or obtained arable land through a relative, are less fretful about access to credit. Not because credit is easy to obtain for them, although as mentioned previously banks do provide loans to registered tenants or sharecroppers, but because these farmers are unlikely to invest much in the land since they are only temporarily cultivating that plot of land. Any permanent investment they make in the land they will lose when the land is returned to the owner. Gayatri's access to her mother-in-law's arable land was an informal arrangement without prospect of landownership. If Gayatri had owned the land, she would have invested in a bore-well because the land has no water source. Had Gayatri taken a loan to invest in irrigation despite not having the land *patta* issued in her name, repaying the loan would have been especially difficult after her husband denied her access and she lost the income from the land. Gayatri's example thus shows what Devereux (2001) argues as a possible consequence of not having legal or social recognition of rights to land. Farmers who cultivate *poramboke* land have a similar experience. Vijay cultivates 0.25 acres of *poramboke* land, as described earlier, which does not qualify for any agricultural schemes or credit programmes. If Vijay wants to invest in this land, he must use private funds, but there is always a risk the government evicts Vijay from that land, and any investment he made will be lost. Farmers who cultivate land through informal access or *poramboke* land, for whom continued access is insecure, are little motivated to invest in the land as their investments may be lost if the owner takes the land back and are thus less willing to seize opportunities for obtaining credit. Besides, farmers who cultivate land without ownership and without registered tenancy need to look for informal loans within their social network, usually against high interest rates, which most farmers try to avoid. Investing in farming is thus challenging without access to bank loans or government schemes and without security of future access to the land.

The arrangements of access to land with and without landownership are common among farming household from all castes, so farmers' challenges of access to credit for land they do not own are similar among all castes. Only the government makes caste an eligibility criterion for loans and other agricultural benefits, in which ST and SC households are prioritised over households from other castes.

Men and women on the other hand, have different sources for access to credit. Men's access to credit depends on banks and the Agricultural Department, for which they can use their landownership,

while women's access to credit depends on banks and financial institutions that offer micro-credit schemes to women's groups and through Rotating Credit and Savings Associations (ROCSAs). ROCSAs are informal women's associations, or locally called *sangam*, through which group members save money by depositing a monthly savings amount. Members can request low-interest individual loans, up to Rs.15,000 at a time, from the group's total savings. After several years, the members collect their total savings, while the profits made from the loans remain in the ROCSA's account to continue their informal lending system. Loans through the *sangam* are more beneficial to women compared to micro-credit schemes, not only because the women have complete control over the terms of the loans, but also because micro-credit schemes are offered by financial institutions with profit motive, commonly providing loans against 21% interest rates. For example, Bandhan has interest rates between 17.95% and 18.95% per annum, Madura⁷ has an interest rate of 20.6%, while Asmitha⁸ charges 24.91% interest, and SHARE⁹ charges between 21.89% and 26% interest, and these are some of the bigger financial institutions in India. Loans accessible to women are often smaller amounts compared to agricultural loans available for landowners, and thus men. For women, it is thus more difficult to obtain agricultural loans against low-interest rates. Instead, women can only get general loans against high-interest rates. Women who head a farm will therefore experience greater challenges to invest in the farm and to earn an income with sufficient profit margin to pay the high interests and have enough left for household needs compared to farms headed by men.

7.1.4 Animal Husbandry and Pastoralism

Access to land not only contributes to household command over food through food production but also enables animal husbandry. Households in Katuyanur keep goats, cows, chickens, oxen, and buffaloes. Livestock contributes to household's command over food in two important ways. First, livestock contributes to household consumption of animal products (milk, curd, meat, and eggs). Households keeping cows or buffaloes have better access to milk and curd compared to households who need to buy these products, although in the dry period of the lactating cycle the former households stop consuming milk and curd altogether. Saravanan and Sarada, for example, had three cows and they used the milk for their own consumption. After selling the cows, their two grandchildren no longer drank milk or eat curd. They kept three calves, so once these are old enough to give milk, their household will consume milk and curd again. Households who do not keep cows consume less milk and curd, although their consumption is more consistent because they have long-term arrangements with local farmers who raise cows or buffaloes from whom they buy a daily quantity of milk. Second, livestock contributes to command over food as a source of income. Households with cows or buffaloes, even if they only keep one, sell part of the milk to Hatsun (Hatsun Agro Product), a state-wide private milk company with a milk bank at the edge of the ST

⁷ <https://maduramicrofinance.com/products/>

⁸ <http://asmithamicrofin.com/inside/product/ptable.html>

⁹ <https://sharemicrofin.com/Approach/Products>

hamlet. Villagers from the ST hamlet and the surrounding area bring the milk to the milk bank twice a day, once in the morning and again in the evening. The milk is brought in milk churns, either by women on foot, or by men on motorbikes. Once every 10 days Hatsun deposits the payment for the procured milk in the supplier's bank account, on average Rs.20-30 per litre milk, depending on the quality and fat content (buffalo milk sells for a higher price than cow milk). Indeed, the Hatsun website states that every farmer's milk is tested for quality (based on fat and solids not fat) which determines the price and farmers get paid every 10 days.¹⁰ Households keep *desi* cows, which provide an average income of Rs.700 per cow per 10 days, depending on care and feeding. Goats and bullocks do not provide regular income, especially since tractors replaced bullocks for ploughing the fields. Instead, these animals are raised and sold when villagers need a substantial amount of money. Goats are easier to make quick money from as a 3-month-old lamb sells for Rs.600 and a full-grown goat sells for as much as Rs.5000. Raising bullocks to maturity takes longer, but the income from sale is much higher. Jaya and Mohan bought a young bullock for Rs.7000 and now the bullock is worth Rs.50 000. Animal husbandry, as a source of food and a source of income, thus directly contributes to command over food.

Not every household can raise livestock; livestock require shelter and land for grazing or fodder (chickens excluded). Households who only have access to housing land cannot easily provide either. Although many such households keep livestock, the number of animals is small, between one and three animals. Households who only have access to housing land usually keep their livestock in a small shed next to their home at night and in fallow fields during the day. Fallow fields seldom provide enough fodder, so households need to supplement the feed by collecting fodder from other lands, from the forest, or by buying fodder from farmers. A few households keep their livestock in the land of a landowning relative. Rani's parents used to keep their goats in a shed on an uncle's land at night. However, after a conflict this arrangement ended. Fortunately, Rani's parents could make a similar arrangement with a landowning relative on the other side of the village. Households without access to arable land thus face difficulties in engaging in animal husbandry because of limited space for a shed and for growing fodder. These households rely on informal arrangements of access to land, particularly for grazing on fallow land and for collecting weeds as fodder.

Households with access to arable land keep 2 to 12 animals and rotate the grazing area between seasonally fallow parts of their land. Farmers grow *solam* as cattle feed and use the straw from paddy and the green leaves from sugarcane to feed cattle. Table 7.7 clearly shows a trend in increase in number of animals kept as the size of arable land the households has access to increases. Furthermore, the table shows that all households with access to land keep their livestock at their own home or in their own land, while only one of the landless households keeps their livestock permanently at their home. Despite access to land, four households do not keep any livestock (see Table 7.7). These households have specific reasons

¹⁰ <https://www.hap.in/milk-procurement.php>

not to engage in animal husbandry. Anuja's household used to keep cows but after moving into the ST hamlet they no longer had space to keep the cows, so they sold them. Gayatri used to keep a cow, but insufficient drinking water for the cow made her give the cow to her married daughter. Vijay used to keep a cow, but his household sold it to pay for the daughter's college fees. Since then, they could not save enough money to buy a new calf. Vijay could manage two cows at most because of limited availability of water and fodder and raising multiple cows would restrict Vijay and Sobia to work as agricultural wage labours. This conflict between animal husbandry and wage labour is common among Katuyanur's households. Access to land for animal husbandry is thus an important source for command over food for rural households, either one's own land or through an informal arrangement that only allows access and withdrawal during the period between harvest and seeding.

Household	Access to Land - Size Category	Livestock	Kept at home/own land?	Forest: grazing?
11	Big	4 cows, 4 calves, 4 goats	Always	No
20	Big	3 cows, 2 calves	Always	No
4	Marginal	2 cows, 1 calf	Always	No
5	Marginal	2 cows	Always	No
8	Marginal	1 cow, 1 calf	Always	No
10	Marginal	None	-	-
14	Marginal	None	-	-
15	Marginal	None	-	-
16	Marginal	2 cows, 1 calf	Always	Yes
6	Small	4 cows, 1 calf	Always	No
9	Small	2 cows, 1 calf	Always	No
13	Small	None	-	-
1		1 goat	No	Yes
2		3 calves	Sometimes	No
3		1 ox	Always	No
7		None	-	-
12		None	-	-
17		2 goats	Always	No (brings fodder)
18		None	-	-
19		2 cows	Always	No

Table 7.7. Livestock kept by Interviewed Households

Households no longer keep large herds to rely on as primary source of livelihood. An elderly Malayali farmer observed villagers cannot care for many animals due to lack of animal feed; they can only use what they grow in their own fields. He recounted that households used to have 30 to 40 goats or cows

which they would bring to the forest for grazing, although pastoralists did need a special pass issued by the Forest Department to access the forest. At that time pastoralism was a main source of livelihood, a full-time job. Today, the Forest Department does not allow any pastoralism in the forest, which is why, according to the elderly farmer, farmers have sold their herds and kept only two or three cows for milk. The earliest livestock census for Salem District that can be found online dates to 1997 when the number of cattle was 341 000, which had increased with 86% by 2018, and number of goats was 321 000, which had increased with 81% by 2018 (Government of India, 2003; Government of Tamil Nadu, 2019d). However, this overall increase in number of cattle and goats in Salem District does not necessarily mean that there also has been an increase of cattle and goats in Katuyanur. Moreover, among the 103 surveyed households in Katuyanur, only one household stated pastoralism as their main source of livelihood. Nowadays villagers only raise livestock on the side, intended to save money on the household's dairy consumption and making some extra money by selling the remainder. Some households who keep livestock do collect fodder from the forest, instead of taking animals into the forest for grazing. Among the 13 interviewed households with livestock, only two households (one landless, one marginal farmer) occasionally have livestock grazing in the forest, and one landless household collects fodder from the forest to bring back to the goats kept at their home (see Table 7.7). For households without access to arable land, pastoralism in the forest could offer a solution to shortage of feed for livestock. Lifting the prohibitions on pastoralism in the forest for the local community could benefit local households' command over food.

7.2 Own-Labour Entitlements

The previous sections showed that in terms of command over food, households without access to arable land are in a slightly better position compared to marginal farmers. The contribution of access to arable land to household food security depends on variables such as land size, access to working irrigation facilities, and bundle of rights. In section 6.2 I argued that households with a primary income from non-agricultural sectors are less vulnerable to food insecurity compared to agricultural wage labourers and marginal and small farmers. These findings suggest that access to arable land is not always a better endowment for command over food than labour-based entitlements. To investigate if access to arable land is one of the most important endowments for rural households, as Pallas (2011) and S. Rao (2017) suggest, this section focusses on the labour-based exchange entitlements for command over food for households who do not have any access to arable land and for households whose production-based entitlements alone would lead to entitlement failure. Investigating the strategies and livelihood options of households without access to arable land, and comparing this with the findings in earlier sections, provides a deeper understanding of the links between access to land and command over food.

In Katuyanur, households without access to arable land only exist among Malayali households, all of whom live in the ST hamlet. Households without access to arable land diversify their livelihood. Without access to arable land, these households depend on selling their labour for their command over food. Labour

opportunities for women differ from labour opportunities for men. Heyer (2014) argued that there has been an increase of labour opportunities for men, but less so for women. The 2011 census, which was discussed in section 3.1, indeed shows that in Salem District only in the agricultural sector most workers are women and that in all other sectors most workers are men. Women's paid labour includes shop keeping, agricultural wage labour, rearing livestock, forest wage labour, tailoring, labourer in incense factory, teacher in *Anganwadi*, and 100-days-work (MGNREGA)¹¹, while men earn money through temporary migration, specialised agricultural wage labourer, driver (lorry, car, or excavators), Fair Price Shop employee, social work (no regular income), and contractor. Unmarried adult men are the only ones who temporarily migrate for work, lorry driver is a popular job among married men, and only very few men work as wage labourers in the agricultural sector. Livelihood diversification happens not only in households without access to arable land; only two of my informants, both big farmers, can live from farming alone. In half my informants' households, at least one male household member, either a husband or a son, stayed away from home most of the month because of work. Women, on the other hand, mostly work as agricultural wage labourers and engage in rearing livestock and forest wage labour. Work through MGNREGA is available in the village but only one middle-aged Malayali woman does this work. The reason for the little interest in 100-days-work is the nature of the work, collecting the rubbish from the ST hamlet every day to burn it, which my informants considered not worth the low wages. The kinds of paid labour villagers engage in are thus diverse and gendered.

Not only do household members engage in various kinds of labour; some household members also combine various types of labour. These household members are usually women who work as daily wage labourers, which is often insecure, temporary, and season-based employment. These women alternate between types of wage labour, for example in agriculture or forest work for the Forest Department, depending on where labourers are required, or combine their wage labour with tailoring, rearing livestock, or shop keeping. One notable absence of labour type is domestic wage labour. Lorber (1994) observed that household work, paid and unpaid, is considered low social status work. Indeed, in Katuyanur, villagers do not ask for domestic labourers, nor are villagers willing to work as such. Women thus often combine multiple sources of paid work with the unpaid labour at home.

Despite livelihood diversification, agricultural wage labour continues to be an important source of income for households without access to arable land. However, not every household without access to arable land is involved in agricultural wage labour, nor is each agricultural wage labourer landless. Some farmers, particularly marginal farmers, combine working on their own land with agricultural wage labour. Santos *et al.* (2014) observed that poor households primarily rely on agricultural wage labour for their

¹¹ The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) targets people in rural areas and guarantees hundred days of employment per year per rural household. In Tamil Nadu the daily wage rate for MGNREGA workers is set at Rs.256 for 2020-21, which came into force on 1st April 2020 (Government of India, 2020).

income. The findings in section 6.2 confirmed this link and emphasised that agricultural wage labourers are among those most vulnerable to food insecurity as agricultural wage labour was found to be least sufficient as livelihood. Among the interviewed households, 15 were engaged in agricultural wage labour and agricultural wage labour was the main source of income for 8 of these households. The remaining households relied on the income from agricultural wage labour, but this income contributed less to the total household income than other income sources. The eight ST households without access to arable land all engaged in agricultural wage labour, compared to 7 out of 12 households with access to arable land. The only ST household with access to land where none of the household member worked in agricultural wage labour is the household of Priti and her elderly parents. Among 84 of the surveyed households who had given detailed data on their various sources of income, 17 out of 52 farmers (all marginal or small farmers) also had income from agricultural wage labour, compared to 28 out of 32 landless households. The four landless households without any income from agricultural wage labour had income from cultivation, forest wage labour, livestock, and other income. This clearly shows that households without access to arable land are highly dependent on the availability of agricultural wage labour for their livelihood.

As agricultural work is heavy manual labour, this kind of work is only for the physically fit; elderly people, people with disabilities, and people with (temporary) health problems are unfit for agricultural work. Farmers hire local labourers in which caste is not an issue; anyone able and willing to work is welcome. This does not imply that agricultural wage labour is a common livelihood among households from every community. In the 15 households involved in agricultural wage labour there are 5 men (all ST, two of whom only engage in specialised agricultural wage labour) and 18 women (15 ST and 3 MBC) working as agricultural wage labourers. The gendered distribution of agricultural wage labour is thus alike the observations Kumar-Range (2001) made among the Malayali in the Kolli Hills, where women dominate agricultural labour. None of the men from BC or MBC households work as agricultural wage labourer, and the three mentioned MBC women stopped going for agricultural wage labour after their household bought cows for the women to look after so the women would no longer need to go out for work. The majority of agricultural wage labourers are thus Malayali women, who are less restricted by men in the household to go out for work compared to women from other castes, a phenomenon that will be further discussed in section 8.3. The higher presence of low-caste women in agricultural wage labour is not a new phenomenon, as in Kapadia's (1995) study in South India the majority of the agricultural wage labourers were SC women.

Malayali women rely on agricultural wage labour for their livelihood, but in terms of command over food, this is an insecure labour-based entitlement relation for three reasons. First, the *availability of agricultural wage labour* is inadequate. Jaya explained agricultural wage labourers can only eat if they have work but work opportunities in and around the village are sparse. Gayatri clearly lives hand-to-mouth: "I go to work, then we can eat" and if there is not enough work "I get a debt and eat." Farmers in Katuyanur

are mostly marginal and small farmers who only hire wage labourers when they cannot do all the work themselves. While all but one of the interviewed households with access to land hire labourers, some only do so for ploughing. Gough (1982) saw that in 1951, '61, and '71, the proportion of agricultural labourers was highest in areas with high rainfall, developed irrigation, and intensive paddy cultivation. In Katuyanur, an important variable that influence availability of labour opportunities was the earlier discussed change in cultivation pattern from subsistence crops to commercial crops. As the latter required less labour, the change affected the demand for agricultural wage labourers in the area. While sugarcane and cassava are profitable crops for farmers, they are not labour-intensive crops. Moreover, sugarcane harvest requires skilled labourers and therefore farmers often offer this work on a contract basis instead of hiring local wage labourers. Thus, even during harvest season, local men are no longer hired as agricultural wage labours. In addition, ploughing is now almost exclusively done with tractors instead of bullocks, another job now lost to local men. In earlier days, when the cropping pattern was more diverse, fields required maintenance throughout the season. Agricultural wage labourers thus suffer from the changed cultivation patterns as their opportunities to sell labour have reduced.

The availability of agricultural work for women varies between no availability for months, especially when rains are absent, and a maximum of 20 days a month. In the months after *Pongal* (mid-January) until August, agricultural labour demands are highest. Agricultural wage labourers prefer to work six days a week, only taking Sundays off to take care of housework, but rarely there are that many days of work. The low demand for labourers leads to increased competition among labourers to get jobs. Labourers keep farmers' messages calling labourers to themselves to ensure not more labourers show up than are needed. Gayatri explained this competition as a consequence of income pressures:

We have a debt, if we go to work, we can repay that. Now can we eat well? Can we buy new clothes? That is why they call no one else; so they can do the work and settle their debts. Many people have many debts.

Households relying on agricultural wage labour for their regular income try to save part of their wages to use for day-to-day expenses in periods of lack of work.

Second, the *gendered division of agricultural labour and gender wage gap* result in women's lesser command over food compared to men. As discussed earlier, Katuyanur's agricultural wage labourers are mostly Malayali women. Women's dominant participation in agricultural wage labour is not only because more women offer their labour compared to men, but also because there is a greater demand for women's labour compared to men's labour. This directly results from a gendered division of labour, based on perceived physical attributes, and of a gender wage gap. A gendered division of paid work is not uncommon, as Lorber (1994) had already observed gendered patterns of paid work in which men's work came with higher status, higher wages, and more benefits. Regularly available agricultural work, such as

planting, weeding, and picking, is considered 'light' work and therefore women's work. Men are only hired for 'heavy' work such as ploughing, making ridges and furrows, building ridges separating lands, and loading the harvest on lorries, and work involving tools, bullocks, machinery, and vehicles. This work is only available at the beginning or the end of the cultivation season. The only work available for men throughout the season is digging canals for irrigation and spraying fertilisers and pesticides, although spraying fertilisers and pesticides is a specialised job for which only a few men own the required equipment. The lesser demand for men in agricultural wage labour is reinforced, as Kapadia (1995) observed, by men's work increasingly becoming mechanised while women's work has not. Work considered as women's work is thus available throughout the season, leading to a greater demand for women labourers compared to men. A gendered division of labour is not an intrinsic sign of inequality and hierarchy, as pointed out by Moore (1988), and a greater demand of women labourers may appear beneficial to women's command over food. However, as Spring (2000) also had pointed out, the gendered division of labour results from beliefs in which men's and women's labour are valued differently.

The divergent values of men's and women's labour is apparent in their daily wages; men earn Rs.400 to Rs.500 for one day's work, while women earn only Rs.200 rupees a day. On rare occasions women receive higher wages, sometimes even up to Rs.400, if the working day is longer than usual and the work more strenuous. However, this is not a rule and not every farmer pays more for longer workdays. Wages in Katuyanur appear higher compared to other villages in Tamil Nadu. Other recent studies in villages in Tamil Nadu report men's wages of close to Rs.200 per day and women's wages Rs.120 per day (Sivasankar, 2020) while Kumar *et al.* (2020) calculated an average wage for agricultural wage labours in Tamil Nadu of Rs.400 for men and Rs.220 for women. While wages vary from one village to the next, Chavan and Bedamatta (2006) show that the gender wage gap for agricultural wage labourers in Tamil Nadu has only increased between 1964-65 and 1999-2000. The gender-based wages motivate farmers to hire women to save money on labour costs, resulting in greater availability of work for women compared to men. Women's wages in Katuyanur are now Rs.200 per day, but that only changed recently. A middle-aged landless ST woman recounted that in 2017, the women in the ST hamlet took a stand together against farmers to demand higher wages for their agricultural wage labour. For several days, the women labourers refused to work until farmers raised their wages from Rs.150 to Rs.200 rupees a day. It did not take long before the farmers agreed to their demand, as they needed labourers. The relationship between farmers and wage labourers thus resembles non-cooperative bargaining with each depending on the other, but simultaneously wanting to maximise their own allocation, even if it hurts the allocation of the other.

Justifications for the gendered wages always refer to differences in physical strength, and women are said to work less, slower, and fewer hours. However, the gendered wages are not the result of differences between men's and women's work because even for equal work, wages are unequal. Pandi regularly hires labourers but had never considered why women get lower wages because "It [wage] is fixed

here, that is how it is: how much women get, and how much men get. Regardless of what work they do, that is what they get.” Santhi’s neighbour, like Santhi a middle-aged ST woman without access to arable land, stated farmers pay women only Rs.200 in wages, regardless of the work: “200 [rupees] they give. They might say to do the irrigating, but they give only 200 rupees. Only 200 we get, that is why we do not do those jobs.” Since women’s wages are fixed, irrelevant of type of work, women are not interested to take up the heavier tasks performed by men. Santhi and her neighbour both argued women would take up work now restricted to men, but only if they received the same Rs.500 for it. Men, on the other hand, are unwilling to take up the ‘lighter’ work for wages equal to women’s wages. One ST farmer only hires women for weeding, because men ask for Rs.500 wages, even though the work is identical to the work women do. Men who work as agricultural wage labourers thus have greater control over the kinds of work they do and the wages they receive compared to women.

While men’s wages are also fixed, the employing farmers do not fix these, but the men themselves. The gendered division of labour in agriculture is thus maintained by the gendered wages. Women do not want to break this gendered division of labour since taking up ‘men’s work’ would not coincide with receiving higher wages; women do not receive equal pay for equal work. Sen (1987) had argued that identical endowments can result in unequal entitlements as different people have different economic opportunities. Section 7.1 already demonstrated this for land as endowment, but clearly own-labour as endowment also results in unequal entitlements, here based on gender alone. The gender-based wages are thus discriminatory, and the result of beliefs that value women inferior to men. While labour-based entitlement relations should be equal among men and women for equal work, the gender wage gap results in a narrower entitlement set for women agricultural wage labourers and reduced command over food as a result.

Third, women agricultural wage labourers lack *accessibility to non-agricultural employment* because of their skills and mobility restrictions. For women, working as agricultural wage labourer is not a conscious choice, rather it is the only work option available. Gayatri would consider taking a job outside the village:

Whatever work I can get, I do. Whatever I can do, whatever I can get, I do. I cannot write. I can sign my name, but that is all the writing I know. Only my signature. What work can I do? [...] I know four places and how to get there. I do not know anything outside [the village]. If I do not know, I cannot go. If I go outside, I cannot read anything, not even which bus to take. Therefore, I stay here, work in the fields. There is no other work here.

Gayatri, like other agricultural wage labourers, is open to employment in other sectors, but lack of non-agricultural skills and education make the shift from agricultural wage labour to a non-agricultural sector difficult. Santhi’s husband compared lack of education with powerlessness; “If you study, you can achieve. We did not study. We do not have eyes; we only have ears.” He was not the only one who felt stuck, that

he had no other options but just continue with the agricultural wage labour he has always done. Restrictions on women's mobility, which I discuss in section 8.3, leads to women being expected to work close to the home, where non-agricultural employment is not available. Towards the end of my fieldwork, Gayatri and six other women from the ST hamlet found work in Salem in an incense factory. However, this employment lasted less than two months as the women could not manage the long working-hours and travel with their responsibilities at home. Agricultural wage labourers from farming households face the additional restraint of combining full-time non-agricultural employment with their workload at the farm. The findings in section 7.1.1 already problematised the argument by Doss, Summerfield and Tsikata (2014) that marginal lands are often an important source for livelihood activities. Additionally, the pressure on marginal farmers' time to combine various income generating activities, either agricultural or non-agricultural, to generate a sustainable livelihood that includes sufficient command over food actually makes their situation more difficult compared to landless households who do have the time to engage in non-agricultural work which generally pays better than agricultural wage labour. Inability to move into non-agricultural employment thus puts agricultural wage labourers in a precarious position as demanding better wages implies risking their income altogether. Even though the women in Katuyanur had earlier successfully bargained with farmers over their wages, women's lack of employment opportunities weakens their bargaining position and their exchange entitlement set for command over food. With agricultural wage labour the least favourable labour-based entitlement relation for command over food, and the inaccessibility of non-agricultural employment for women, women would benefit more from access to land in terms of command over food, while for men non-agricultural employment provides greater potential for command over food compared to access to land.

7.2.1 Hunting and Gathering

The preceding discussion focussed on income derived from own-labour. However, some common own-labour entitlements do not constitute wages but constitute edible resources. The geographical location of Katuyanur makes access to forests an important endowment in command over food. Hunting small forest animals and gathering minor forest produce are important activities that contribute to command over food. As discussed in section 5.4.2, access to the Katuyanur Reserved Forest is conditional with different social units holding different bundles of rights to the forest. The main use of the forest for Katuyanur's villagers is for collecting firewood. Among the 103 surveyed households, 38 households (6 BC, 9 MBC, 2 SC, and 21 ST) regularly collect firewood in the forest. These households were a mix of households with access to land (8 marginal, 10 small, 5 big) and landless households (15) and thus not all landless households said they collect firewood. This is a much more varied population compared to the interviewed households, as all eight landless households indicated they collect firewood from the forest, while among the 12 remaining households with access to land there was an equal split between those who do collect firewood and those who do not.

Firewood is not the only minor forest produce collected from the forest. Towards the end of my first month of fieldwork, Jaya came by the house to ask if I wanted a tour of the forest since she was free that day. I joined her and Apsana and we crossed the agricultural fields to get to the Katuyanur Reserved Forest. We followed an unpaved road between the forest and the agricultural fields until we encountered a junction with one road continuing along the forest edge, circling the village, and another road going into the forest and up the hills passing a temple and two villages, eventually reaching the hill-station of Yercaud. We took the road leading into the forest and the further we walked, the taller the trees became and the denser the vegetation. At a spot where Apsana knew fruit trees stood nearby, she told us to wait while she left the road and walked into the forest to look for fruits. When she appeared again, she did not carry any fruits, saying none had ripened yet. We retraced our steps back to the village and twice spotted a large beehive hanging high from a tree branch. Apsana later gave her husband directions to the beehives so he could collect the honey. Close to the edge of the forest, before heading into the ST hamlet, we stopped again and Jaya and Apsana went looking for berries, but not many berries were ripe either.

Edible forest produce, such as vegetables, tubers, fruits, tamarind, herbs, and honey, is an important source of food for households in Katuyanur, although they cannot rely on it for their diet because availability of wild foods is limited and seasonal and the effort required to gather these foods is considerable. Wild cassava, a traditional tuberous root vegetable, still grows in the forest with the roots long and thick, and deep underground. Digging the tubers up is time-consuming work, but villagers have little spare time. Households therefore do not rely on wild cassava or other edible forest produce as a regular food source. However, villagers prefer the taste of the wild cassava over the small versions for sale in the market, so once in a while, the occasional villager goes in search of the wild root vegetable in the forest. Wild forest foods, although limited in availability, contributes to households' food access and dietary diversity.

Besides collecting minor forest produce, Malayali villagers traditionally consumed certain types of caught wildlife. The Katuyanur Reserved Forest is home to deer, foxes, rabbits, and snakes. According to the Forest Department, wild animals commonly spotted in this area are the Indian Gaur, Spotted Deer, Barking Deer, and Wild Boar (Tamil Nadu Forest Department, 2016b). Other wild animals such as wolves, wild bulls, wild pigs, and peacocks used to live in the forest, but nowadays villagers rarely see these animals. When these animals were still plentiful, they regularly came out of the forest to eat crops growing in the agricultural fields, particularly the wild pigs. Hunting in the forest is no longer allowed, but villagers used to hunt rabbits and occasionally deer for their own consumption by setting out nooses at night. According to the Wildlife (Protection) Act, 1972, hunting wild animals is completely banned and all wildlife is considered government property (Tamil Nadu Forest Department, 2016a). For Malayali households, hunting in the forest for non-threatened animals such as rabbits could offer an important contribution to

their diet. Lifting or adjusting the prohibitions on hunting in the forest for the local community could benefit local households' command over food.

7.3 Conclusion

In this chapter I investigated how households in Katuyanur use production-based entitlements and own-labour entitlements to obtain command over food. Entitlements represent the maximum possibilities a person or group has in commanding commodities, based on their endowments. These maximum possibilities are theoretical, and represent the capability to command commodities, while the actual command may be less. Therefore, I argued that additional factors and endowments as well as social variables are crucial in households' ability to derive command over food from access to land and own-labour. Each entitlement relation depends on several other entitlement relations that strengthen or hamper an exchange. In doing so I showed that a household's exchange entitlement set for command over food is not an automatic achievement and that equal endowments do not always result in equal entitlements, as Sen (1987) had already argued. Leach, Mearns and Scoones (1999) had made a similar argument that additional endowments in terms of labour and capital are required to derive production-based entitlements from land and to this argument I added the importance of social variables, specifically gender, and not only in relation to production-based entitlements, but also in relation to own-labour entitlements.

To support this argument, I showed that access to arable land does not always contribute towards households' command over food. Rather, the contribution of land endowments depends on multiple variables, most importantly the size of land, access to working irrigation facilities, and access to credit for investment in cultivation. Doss, Summerfield and Tsikata (2014) had argued that marginal lands are an important source for livelihood activities. However, the data presented in this chapter shows that marginal farmers are very vulnerable to food insecurity, more so than landless households with non-agricultural incomes. Without the need to invest time and labour in cultivating their land, these marginal farmers could potentially improve their entitlement set, and consequently their command over food, by taking up non-agricultural activities. The only farmers in Katuyanur who can subsist on production-based entitlements alone are big farmers, while 83% of the farmers in Katuyanur are marginal and small farmers for whom the production-based entitlement set alone leads to entitlement failure, requiring them to take up other income earning activities alongside cultivation. This shows that a greater exchange entitlement set, i.e., the total set of theoretical opportunities, does not always result in greater command over food, as opposed to what the entitlement approach suggests.

Besides the size of land households have access to, an important additional endowment that determines command over food is access to working irrigation facilities. This chapter showed that most food secure households have working irrigation facilities and households who are severely food insecure are more likely not to have any irrigation facilities (working or not). While surprisingly the ST community

had the greatest percentage of farms with irrigation facilities, farms owned by women were twice as likely not to have irrigation facilities compared to farms owned by men. While all these households have land endowments, the success of their exchange entitlement set in obtaining sufficient command over food depends on working irrigation facilities as additional endowment. Without this additional endowment, households cannot turn their endowment into command over food. This means that endowments and exchange entitlements cannot be analysed as one linear process but need to be positioned within a web of multiple endowments and exchange entitlements that interact, reinforce, and hamper each other.

Additionally, the success of a production-based exchange entitlement set in obtaining sufficient command over food depends on access to credit and to government schemes to invest in cultivation. Agricultural subsidies and credit schemes offered by the Agricultural Department and credit schemes from private financial institutions often require landownership as eligibility criterium. The Government of Tamil Nadu considers being a farmer as synonym to being a landowner and only landowners can receive a farmer certificate to apply for various agricultural schemes, benefits, subsidies, and loans (Government of Tamil Nadu, 2016). For access to credit through private financial institutions, if land is required as collateral for a loan, the farmer needs to have a bundle of rights that includes the right of alienation, and generally this is only the case for landowners. This means that farmers who do not own the land they cultivate, which is common among all communities, are excluded from such credit and subsidy schemes and have fewer opportunities to access credit. Consequently, these farmers require savings or informal loans to make investments. This has important repercussions for women farmers, who rarely own the land they cultivate. Lacking options for access to credit, women take loans from financial institutions that target women and offer women's groups small but high-interest loans. Access to credit offers opportunities within farmers' production-based entitlement set, but it simultaneously poses a risk on future entitlements as farmers who default on a loan may be forced to sell (part of) their land, which means their entitlement set shrinks and the risk of entitlement failure increases.

Not only the specific bundle of rights is relevant in investment opportunities, so is security of continuation of the bundle of rights. Farmers who expect to own their land in the future, for example through inheritance, are motivated to invest in the land, although they prefer to wait until the land *patta* is issued in their name. Farmers for whom continued access to land is uncertain are less willing to invest in developing the land because of the risk of losing access to the land, and consequently the production-based entitlements, and being left with a debt without means to repay it. Farmers with access to arable land without security of continued access thus have fewer opportunities to obtain capital to invest in the development of their land and investment risks are higher. The strength of production-based entitlements for command over food thus depends on the bundle of rights derived from that land, particularly alienation, the security of the bundle of rights, and on the government's definition of who a farmer is.

Besides production-based entitlements through cultivation, this chapter also discussed the role of animal husbandry and pastoralism in production-based entitlements. Livestock is a source of income as well as a source of food. This chapter showed that the larger a farm, the greater the number of animals kept. Not every household can raise livestock; livestock require shelter and land for grazing or fodder. Households without access to arable land cannot easily provide either, but a few can keep their livestock in the land of a landowning relative. Such informal arrangements of access to land for animal husbandry usually only include a bundle of rights that includes entry and withdrawal, but both rights come with restrictions. Households with access to arable land can keep livestock on their land for shelter and grazing. Animal husbandry is no longer a main source of livelihood; households only keep livestock for their own consumption and to complement their other incomes. Households face shortage of fodder, water, time, and access to the forest for pastoralism, and are therefore unable to keep large herds. Production-based entitlements through animal husbandry and pastoralism thus also rely on access to land with a bundle of rights that includes entry and withdrawal. Simultaneously, this shows that access to land does not guarantee production-based entitlements, nor is it necessary to own the land a social actor has access to. Understanding the bundle of rights required for specific production-based entitlements, including the conditions, restrictions, and temporality of the rights, should thus be a crucial step in any application of the entitlement approach.

Only big farmers have a production-based entitlement set resulting in sufficient command over food. The majority of the farming households rely on own-labour entitlements, just like households without access to arable land. Men are venturing outside the village for non-agricultural work, particularly as drivers, while women stay within the village boundaries where they combine various types of daily wage labour to increase their number of working days. Households without access to arable land only have their labour to sell, while households with access to arable land can command food through production-based entitlements and own-labour entitlements. Households with access to land thus have a greater exchange entitlement set compared to landless households. However, this does not result in every household with access to land to be better off in terms of command over food compared to households without access to arable land. Farmers utilise own-labour entitlements as back-up when production-based entitlements do not lead to sufficient command over food, but time restraints make simultaneous utilisation of the two entitlement relations impossible. Own-labour entitlements can be obtained through employment, but also through hunting and gathering. This latter own-labour entitlement is important in households' command over food, especially for the ST community who is least likely to have access to arable land. Illegalising hunting in the forest specifically affected the food security of Malayali households as this community traditionally eats wild (deer and rabbit). BC and MBC castes do not eat these wild meats and are therefore less affected by changes in forest access. Analysis of own-labour entitlements thus again shows that

endowments and exchange entitlements cannot be analysed as one linear process as different exchange entitlements interact, reinforce, and hamper each other.

Almost the entire labour force of agricultural wage labourers in Katuyanur is made up of Malayali women, landless as well as marginal farmers. The greater proportion of women in agricultural wage labour is the outcome of a gendered division of labour, in which women's labour is cheaper and men's labour has largely been made redundant as a result of changed cultivation patterns. The demand for women's labour has put women in a better bargaining position in their relationship with farmers, which is a relationship of non-cooperative conflict, but women are still in a relatively weaker bargaining position because they have no other employment options. While the lack of demand of men's labour has resulted in men moving into non-agricultural employment, supply of ST women's labour has remained high as non-agricultural work is inaccessible to women due to restrictions on women's mobility, lack of non-agricultural skills, and expectations of women's responsibilities in the household. ST women thus have a substantially less equipped entitlement set for command over food compared to any other group of women and compared to men. Other groups of women do not necessarily have more labour options compared to ST women, but they do have access to arable land for cultivation and raising livestock. However, if they lose access to this land, for example because of divorce or denied access in widowhood, agricultural wage labour is also the only livelihood option for MBC and BC women. Women's capability for command over food thus depends on agricultural wage labour, a weak exchange entitlement, and on a production-based entitlement that entirely depends on their relationship with men.

Chapter 6 showed that households' limiting factor for obtaining food is income. Lowering food prices may thus appear beneficial, but for rural populations this might result in greater food insecurity, especially if that means cultivators cannot afford to hire agricultural wage labourers, who then in turn do not have any income to buy food, despite the decreased food prices. Households with non-agricultural livelihoods are less vulnerable to food insecurity compared to households with a main livelihood from agricultural wage labour and compared to marginal farmers. However, this finding has important implications for women for whom non-agricultural employment is inaccessible. The income gap between spouses will likely widen due to men's better paid employment opportunities compared to women, a development that will have implications for intra-household relations and decision-making, as will be discussed in the next chapter. Non-agricultural employment has a greater potential for command over food for men than agricultural wage labour, but for women non-agricultural employment is inaccessible and therefore access to land would have a greater contribution to women's command over food compared to command over food through own-labour entitlement relations. Conventional one-directional links between land tenure and food security, or endowments and entitlements, thus do not capture the complexity and dynamics that exist between land and food, as Maxwell and Wiebe (1999) had rightly argued, as the additional factors and endowments of land size, access to irrigation facilities, access to

credit, and access to labour opportunities play an important role in households' ability to obtain command over food with social variables interwoven with these additional factors and endowments.

Chapter 8 - Intra-Household Bargaining for Food Security

On a Sunday in July, I attended a *puja* held in a forest temple. While waiting for the women preparing *koozh* and *kali*, I sat down with a group of seven girls, chatting in the shadow of a tree. The girls were interested in my research, and I explained that part of it investigates the connection between women's landownership and decision-making. Two sisters, 18- and 21-years-old, responded that this issue is very relevant to their village because their father makes every decision at home. They explained that they can ask their mother when they want something or when want to go somewhere, but the permission depends on their father's opinion. Another example they gave is that their mother works as agricultural wage labourer, but she gives her wages to the sisters' father, otherwise he would get angry with their mother.

As the relationship of these sisters' parents indicates, decision-making and control over resources within households is far from equal among household members, particularly spouses. Indeed, Malayali women I spoke with stated that their husbands often do not listen to their opinions and even if they do listen, their opinions do not carry the same weight as their husbands' opinions. For example, Apsana explained that her husband listens to her ideas and opinions, but at the end of the day, he makes the household decisions. The women's experiences aligned with the perceptions of Malayali men, who usually considered decision-making their own responsibility. One of these men was Mohan, who stated that women take care of cooking and the children, while men decide about their lives and their livelihoods. His wife can disagree with him and tell him so, but he is the one to make the final decision. Mohan thus might listen to his wife's opinions, but he judges whether her opinion has valid grounds. Similarly, a landless contractor makes every big decision in his household, even though he is home only two days a week. His wife always asks his opinion before doing anything. He stated she can give suggestions, but he evaluates her suggestion and decides what they will do. Although these accounts suggest that men are the main decision-makers within a household, the discussion and evidence presented in this chapter will show that intra-household relations are more complex than these accounts suggest and that several household-management models can co-exist within single households, depending on the situation and what decisions are about.

In the entitlement approach, as previous chapters discussed, household food security is an entitlement derived from endowments of land and labour through exchange. Women contribute to household food security through various activities such as food production and food preparation, but, as Bhandari (2017) aptly argues, understanding women's role in household food security involves understanding if women also have power to make choices related to these activities. Devereux (2001) and Leach, Mearns and Scoones (1999) rightly pointed out that decisions on which exchanges between endowments and entitlements should be realised highly depend on intra-household power relations.

Identifying and understanding the power relations within households is important as Sharma (1980) argues that this reveals the status of women within the household. Deutsch (2007) emphasises that the home can be a place of women's oppression as well as a place where women can exercise power. As gender is produced and reproduced in everyday social interactions (Lorber, 1994; West and Zimmerman, 1987) women's status within the household is inherently linked to women's status within the wider community (Chakrabarti, 2019; Hartmann, 1981; Kevane, 2000) and this provides context for gendered resource allocation, access, and control (Dube, 1997; Hartmann, 1981; Meinzen-Dick *et al.*, 1997). This does not mean all women are in equal positions of power, as gendered power relations are crosscut by race, age, caste, ethnicity, class, religion, culture, and disability (Andersen, 2005; Mohanty, 1984; Momsen, 2019).

As discussed in section 2.4.3, the distribution of resources within sets of relationships, such as the household, is the outcome of cooperative conflict, or bargaining, and thus represent the distribution of power within that relationship (Agarwal, 1994; Kandiyoti, 2005; Katz, 1997; Mangubhai, 2014; Sen, 1985, 1987). Chapters 1 and 2 identified various factors that influence bargaining power, but none of these factors guarantee a bargaining outcome, as every bargain is situational (Agarwal, 1994; Chakrabarti, 2019; Dube, 1997; Rao, 2014; Ribot and Peluso, 2003). Acts of decision-making, or the absence thereof, i.e., the 'power of non-decision-making' (Kabeer, 1997), reveal the subtleties of intra-household power relations since decision-making can act as proxy for bargaining power (Sariyev, Loos and Zeller, 2020). Bhandari (2017) argued that four broad economic categories address women's decision-making power over household food security: women's income, women's ability to own assets such as land, women's labour force participation, and women's ability to obtain loans and credit. Similarly, Leacock (1978 in Moore, 1988) argued that women's status depends on their control over resources, control over their labour conditions, and control over how the products of their labour are distributed. Therefore, the current chapter investigates how control over land, labour, and income, three important indicators for bargaining power, influence intra-household processes of decision-making regarding the allocation of household resources towards command over food and the allocation of food among household members.

Although I acknowledge bargaining power is situational and temporal, in this chapter I argue that women's intra-household decision-making, and consequently bargaining power, depends less on their ownership and control over land compared to their participation in paid labour, although rigid gendered social norms limit the contribution of paid labour to women's bargaining power. As the majority of the villagers in Katuyanur are landless or marginal landholders, the absence of a link between women's landownership and bargaining power might be specific to the socio-economic circumstances of the research location. The complexity of intra-household power relations and the strong influence of social norms is firstly illustrated by control over labour as women who engage in paid labour choose to do so themselves, suggesting they control how they allocate their own labour, while simultaneously these women's labour engagement choices are restricted by men's control over when and where they work.

Secondly, even in situations where women's relative intra-household bargaining power is expected to increase as a result of an intra-household change in control over land, they continue to depend on men for exchanging the products of the land into income. This chapter will show that while a household's property is considered common property, there are differences in bundles of rights among household members, which play a role in what benefits are derived from the land and how these benefits are allocated towards command over food. Thirdly, household members make different contributions to the household's total income and labour, but relative contribution does not equal relative bargaining power. Lastly, women are less consistent in the number of meals they have per day as taking time to eat conflicts with their workload, which is determined by a strict gendered division of labour.

In order to investigate intra-household power relations through processes of decision-making in relation to the allocation of household resources towards command over food and the allocation of food among household members, this chapter is structured into four sections. The first section discusses the role of income contributions and control in bargaining power and in bargaining for command over food. This is followed by an investigation of the role of ownership and control over land in bargaining power and in bargaining for command over food. The third section focusses on the role of labour contributions and control over labour allocations in bargaining power and in bargaining for command over food. And the final section looks into the role of land, labour, income, and gendered social norms in the intra-household allocation of food.

8.1 Income Management and Allocation

Households in Katuyanur rely on income to obtain sufficient command over food. Even big farmers cannot obtain all their food needs through self-production; none of the farmers in this study are entirely food self-sufficient. Households' food expenses use up a considerable proportion of the total income. Simultaneously, food is one of the few expenses that households can cut back on when other expenses are higher than usual. Apsana explained that food in their household "is not a major expense. If we always eat what we want, then it becomes a major expense." Compromising on food expenses thus leaves more space for non-food expenses. Households' main regular expenses, other than food, are education, healthcare, repaying debts, and petrol. When non-food expenses increase, the food budget is reduced. One woman, an MBC marginal farmer, occasionally has less to eat in her home when they need to repay a loan. The main strategies households use to compromise on food expenses I already discussed in section 6.2. Households who are better off have more expenses, especially for things such as petrol, and their food budget is not always bigger, but they do have greater options for cutting back on their non-food expenses.

Different studies on the Indian household report varying models for resource allocations (For example, Balasubramanian, 2013; Clark-Decès, 2014; Heath and Tan, 2020; Munro *et al.*, 2014). Katz (1997) even argues that it is possible for a unitary model, cooperative model, and non-cooperative model to coexist within a single household, depending on the type of resource that is allocated. As

typical for a cooperative household, households in Katuyanur pool the income earned by individual household members. Pooling of income does not imply that individual purchases are rare. Usually, one household member keeps the household's money, giving the other household members small amounts to spend in the form of pocket money. Some informants argued that money is best kept with women since women try to save money while men spend money, a belief also expressed by a landless driver: "At home she [my wife] knows best, I do not. I only give her the money. She is maintaining us completely." Women spend without discussing on collective needs, such as cooking ingredients, kitchen utensils, or snack and toys for the children, but also individually such as making offerings at a temple, buying a new saree, or buying fashion accessories. Women make these purchases in the village, as vendors visit the village regularly, and are relatively small expenses. Men also use part of the income for individual expenses without discussing, such as paying for tea or lunch taken outside the home, or for cigarettes or petrol.

The allocation of pocket money from the household's pooled income does not correlate to income contribution, but to (perceived) differences in needs, responsibilities, and labour. This findings supports Sen's (1987) argument of the role of perception bias in cooperative conflict, in which bargaining power depends on one's own assessment of interests and well-being and on contribution perceptions, which can differ from actual contributions. A driver argued spouses have different financial needs: "there is a difference in expenses, money is a responsibility. If I go elsewhere, I need Rs.200 for petrol and Rs.100 for spending money." Since women rarely leave the village, especially alone, they should not need money. These perceptions on need are guided by the gendered division of labour, which, as sections 8.2 and 8.3 will show, is controlled by men. Simultaneously, there are expenditures clearly linked to gender relations, for example, men spend money on their parents and siblings, while women are rarely allowed by husbands or parents-in-law to support their parents financially, as seen in section 5.3. Kabeer (1997) argued that such gendered spending patterns result from patrilocal marriage practice in which women are considered to belong to their husbands' lineage after marriage, a practice and perception also shared by Katuyanur's inhabitants, which was discussed in section 5.3. The differences in needs are thus the outcome of men's perceptions on gendered needs rather than women's perceptions on their own needs for pocket money. Even though a greater contribution to the household income does not result in a greater allocation of pocket money, women in Katuyanur do feel it is important to have paid work. Not only because it increases the household's total income but also because they can keep some money for themselves instead of needing to ask a husband for money, which he might not give. This implies women have little control over allocating pocket-money to themselves from the household's pooled income. The role of paid labour on women's intra-household bargaining position will be further discussed in section 8.3.

After collecting and pooling all income, either wages or from sale of crops, households need to decide which part of the total income they spend on food, which part on non-food, and which part they invest in a new round of production/labour. Dube (1997) wrote that choices are never independent of

other choices; instead, choices limit or enforce each other. This is highly relevant for choices on income allocation for food as these depend on income allocation choices for non-food and on (past) labour or production investment choices. Farmers depend on their land for their food, so most of their earnings and wages, after paying off debts, they re-invest in cultivation. Households without access to land depend on the sale of their labour, and decisions on how to allocate income is a day-to-day occurrence rather than a seasonal one based on harvest and planting. Kabeer (1997) writes that in Bangladesh there was no apparent difference in income allocation interests between household members. Indeed, in Katuayanur a common interest was to increase the household's welfare. However, the aforementioned expectation of women not leaving the village does translate into gendered preferences on income allocation. Since women have few opportunities to spend money, their expenditures are limited to jewellery and clothing, while men spend money on fuel to travel to towns and cities and are more likely to spend money on expensive products like motorbikes and smartphones. This is clearly visible within households where women rarely have their own transportation, while only very few men do not have a motorbike or TVS, and women rarely own their own phone, let alone a smartphone. For the fishing households in Busby's (2000) study, women were known for saving money and spending money wisely while men were known for easily and impulsively spending money. This is similar in Katuayanur, as women's different situation compared to men results in women preferring to save money or spend money on the household rather than on individual expenses and on non-food expenses.

One important difference in income allocation preferences relates to repaying loans, which is a major expense for most households. Women often give greater priority to making loan repayments compared to men. Anuja explained she worried more about repaying loans compared to her husband because she is at home all day while her husband works away from home, and consequently borrowers or moneylenders come to ask her for the loan instalments. Similarly, a farming MBC woman feels greater pressure to repay loans compared to her husband because her husband is a lorry driver and often away from home, so if they do not make a payment, a debt collector visits their home, and approach her to get the payment. Pressure from moneylenders to pay instalments thus results in women giving higher priority to repaying loans compared to men. However, men are not entirely unconcerned or uninvolved when it comes to repaying these loans, unlike the situations sketched by Balasubramanian (2013) in which men in South Asia appropriate women's loans and leave women to fend for themselves in repaying the loan. This is not seen in Katuayanur, where the use and repayment of the loan is considered a shared responsibility, albeit prioritised differently. Men and women's different priorities regarding income allocation are thus not inherent value differences based on gender but, as Jane Guyer (1988 in Kevane, 2000) and Bhandari (2017) already argued, is a reflection of men's and women's structurally different situations and societal expectations in which women are mostly spending their time at home while men spend more time outside the village.

Irregular incomes, for wage labourers and cultivators alike, result in little calculation of what proportion of income should be spent on food. Cultivators have seasonal incomes, but these vary depending on water availability, crop productivity, and market prices, which are difficult to predict. Incomes of agricultural wage labourers are irregular and unpredictable as availability of labour depends on the productivity of farms and labourers know only one or two days in advance if work becomes available. Households' weekly spending on food ranges between Rs.200 and Rs.1000 and depends on the number of household members, the ability to cultivate food, and the household's total income. Certain food purchases are routinely made. For example, households usually buy rice in 25kg bags and keep income aside to buy a new bag before the last finishes. Milk is collected in a fixed quantity from a local farmer every day but paid on a weekly basis. Other food purchases are more variable. Vegetables are bought at the market for several days at a time, but the exact amount depends on how much money a household has to spend. More expensive foods such as meat are not part of households' regular diet and are only bought when there is extra money or for a special occasion. How much money households have to buy vegetables or meat literally refers to the cash they have in hand after making all their required non-food payments; with the remaining money they buy food.

Households' food purchases thus have little diversity as their budget is too tight to buy anything above the bare minimum. One landless driver complained they always eat rice with dhal, not because that was all his wife would cook, but as a general disappointment of not being able to afford anything more. Within the concept of choice, Kabeer (1997) makes a distinction between imperatives, preferences, needs, and interests. For households who consistently lack the resources to buy the food they prefer, their restricted budget dictates what food items households buy and how much. Such restrictions on choices is what Kabeer (1997) refers to as 'constrained choices'. When income is used for imperatives, for minimum needs for survival, there is little choice to consider, which is what Kabeer (1997) refers to as an 'optionless' choice. In such situations of constrained choices or optionless choices, as Busby (2000) argued, control over money can actually be a burden rather than result in power. This also means that without options on income allocation, bargaining between household members cannot take place.

When income allocation choices do need to be made, the household member who keeps the money does not always have the final say. Decisions on the allocation of pooled income are made among spouses and parents(-in-law) through discussion, or in other words, through cooperative bargaining. When irregular expenses come up, household members discuss how to manage paying this. Saravanan always talks about a purchase before buying something more expensive than usual:

I ask. We all have to do it together. If we need to buy something, I ask and then do. Now we cannot buy it. I ask, shall we buy that, shall we do that? With everyone in the house, my daughter-in-law, the entire house.

Informants usually stated something similar, that household members discuss expenses, but it is difficult to determine which household member has most control, the greatest bargaining power, over the household's income allocation. Women's control over income is crucial for household food security as several studies indicated that women spend a greater part of their income on household expenditures (Allendorf, 2007; Meinzen-Dick *et al.*, 1997; Quisumbing *et al.*, 1995; Rao, 2006; Rao, Pradhan and Roy, 2017; Sraboni *et al.*, 2014; Wiggins and Keats, 2013). In most households, men dominate decision-making regarding income allocation. Anuja's husband controls everything Anuja buys: "When I ask, he says I can buy without asking, if I do not ask, he asks why I did not ask. So, what should I do [laughing]?" Her husband thus suggests she can make her own decisions about spending money while in reality he controls what decisions she can make in which situations. In Rani's household her husband makes all decisions regarding expenses. For example, Rani does not want any new loans, but she also does not question her husband when he is planning to get another loan, sometimes even in her name, because she knows he does not listen to her. Kabeer (1997) writes that in Bangladesh, household income managed by men largely overlapped with income controlled by men, either individually or in consultation with other household members. This was not always due to men's appropriation of women's incomes, but was frequently explained as the result of convenience or gender ideology (Kabeer, 1997). The defence given by men in Katuyanur for their greater power in intra-household income allocation is not much different. For example, Mohan justifies his domination in decision-making in the household by arguing that he maintains the household because of his network, mobility, and income. In decisions about income allocation, as with other household decisions, men have greater decision-making power.

However, relative bargaining power is situational. While men generally are in a better bargaining position, men do not have greater bargaining power in each decision on income allocation. Intra-household bargaining positions for income decisions are not fixed; there are, as Agarwal (1994) wrote, 'several levels of bargaining' with household members' relative bargaining power fluctuating depending on the specific incomes and specific expenses that is being bargained about. Similarly, Feldstein (1986, in Moser, 1993) argued that household management is the combined result of shared, independent, and conflicting goals, benefits, and resources. Indeed, household management in Katuyanur's households depends on what is bargained about and whether household members' desired outcome in this bargain is shared, independent, or conflicting. Rani manages the income from the shop as she keeps it inside the shop and gives Sethu what he needs for his daily expenses, such as money for petrol and lunch. Sometimes when her husband asks her for money, she tells him they do not have it. Vendors regularly come to the village and Rani takes money from the shop to buy onions, dried fish, bangles, or something else she likes or needs. When the shop need restocking, Rani decides what is needed and tells Sethu to buy it or to call a wholesale company to deliver, depending on the required items. If Sethu buys the items, Rani gives him money, if a wholesale company delivers at the shop, Rani receives and pays them. When Rani goes to work as an

agricultural wage labourer, she does not keep that income in the shop, but gives her wages to her husband who uses it to pay off their debts. These payments happen outside the home, and since she never goes anywhere, her husband makes their loan payments. Rani seems in control over the income and expenses related to the shop, while Sethu manages the other incomes and is responsible to pay off the debts. Even though the household pools resources, bargaining power over the allocation of these resources varies, depending on the location of a decision within the division of household labour within the household. This supports not only the argument that bargaining is situational (Agarwal, 1994; Chakrabarti, 2019; Dube, 1997; Rao, 2014; Ribot and Peluso, 2003), but also provides evidence for Katz' (1997) argument of the complexity of income management systems prevalent within households. Consequently, Kabeer's (1997) findings in Bangladesh, where differences in complete pooling occurred in which household members did not know whose contributions were used for what and a pooling in which certain incomes are earmarked for certain expenses, can be taken a step further to show that these differences in pooling can even occur within one household rather than just across households.

The gendered division of household labour plays a role in who make which decisions but is not all decisive. Men are responsible for the household's grocery shopping at the weekly vegetable market or shops in nearby towns, but this does not imply men always decide what to buy or how much to spend on food. Women do all the cooking all the time but that does not mean other household members have no say at all in what is prepared. In terms of grocery shopping, often women list the groceries they need or want to a husband, son, or father-in-law, who then buys those groceries, although men also bring unrequested food items home. Of all the women I spoke with, only Anuja does not always tell her husband what he needs to buy: "He asks me what to buy, but he also looks to see what is needed. If I ask, sometimes he gets angry, so I do not ask." On other occasions, if Anuja tells her husband that a particular ingredient is needed, her husband responds she should adjust without it for a few days until he has the money for it. Women therefore anticipate what needs re-stocking before they run out, in case there will not be any money available for several days. This suggests that both spouses have some say in *what* food is bought, but women's lack of insight in how much money there is at the moment and what non-regular expenses will be made in the coming days results in men's greater decision-making power in *when* specific food items are bought. Thus, as both spouses have some influence on grocery shopping and discuss, or bargain, to optimise both their preferences in allocation, grocery shopping could be considered cooperative bargaining.

Several intertwined restrictions make it difficult for women to do the shopping and gain more control in *when* food is bought. Firstly, women do not have their own transportation; they can only go to the market or shops on foot. If lucky, they can catch a lift to town or back home when someone on a motorbike passes them on the road. Among the women in the informants' households, only Priti and Anita know how to drive a TVS, which they occasionally use for food shopping. Amudha always goes grocery

shopping, due to her husband's illness, but can only go on foot as her household does not own a vehicle. Women's lack of transportation combined with not knowing how to drive sons' or husbands' vehicles thus result in women's less advantageous bargaining position compared to men in a bargain on when food is bought. Here the role of fall-back position is very clear; if cooperation fails, men can continue to move around to get food as before, but women will need to find someone else to buy their food for them. Secondly, it would require challenging established social norms and practices. Priti's husband used to do all the shopping but as a widow, Priti now has to do it herself, which she does not enjoy. She finds it difficult; "when you go outside people look at you in a particular way and talk about you, I do not like that." Thirdly, taking responsibility over grocery shopping would increase women's already heavy work burden. In a study on women's shopping experience in India and the USA, Williams and Paul (2014) also recognised shopping as a burden, but found simultaneously that women in both countries enjoyed shopping and gained feelings of satisfaction and authority. However, none of the women I spoke with expressed any desire to do the household's shopping; they prefer the current arrangement. Thus, food shopping is a time-consuming responsibility assigned to men within the gendered division of labour, and maintaining this situation is more beneficial to women than challenging it.

When it comes to meal preparation, women decide what to cook or cook what children are asking for. Some women take more control than others. A Malayali woman always decides what to cook: "when he [my husband] asks I want this, I want that, no, whatever I have cooked that he can eat", to which her husband responded teasingly "I never get what I ask." Some women change their mind on what to prepare based on others' wishes. Sarada decides what she will cook, but this is not fixed:

Whatever I need for cooking something, I tell him [my husband] to buy. Today I want to make this, then he may say 'no I do not want that, cook something else', which I do.

Women make the initial decision on what they will cook, but other household members also give ideas or ask for particular meals, and dishes alternate according to the household members' preferences. Bargaining over food preparation thus only takes place when there is a conflict in preference. Indeed, Strauss et al. (2000) argued that not all intra-household allocations are the result of conflict as some are joint decisions based on joint preferences.

However, sometimes bargaining is simply not explicit or has been settled long before. Rani always cooks rice for all three meals of the day as her husband and sons prefer to eat only that. Rani and her daughters like to eat *idli*, *dosa*, or chapatti, so once in a while Rani prepares that for herself and her daughters to eat. However, she always prepares rice alongside it for her husband and sons because they complain if they have to eat something other than rice or even refuse to eat. Her daughters, on the other hand, rarely say anything about the non-rice dishes being prepared far less frequently than they would like. The men's food preferences thus take precedence over the women's preferences but bargaining over food preparation does not visibly take place on a regular basis. This nevertheless fits within cooperative

bargaining, as Manser and Brown (1980) emphasise that within a cooperative bargaining analysis it can be assumed that social actors are aware of each other's preferences. Thus, as cooking is a daily routine and the cook knows the household members' food preferences, bargaining over the type of meals rarely takes place explicitly as the bargains have already been settled long before. Thus, the bargaining process between spouses may be infinite and only terminated through divorce or death (Balasubramanian, 2013), concrete bargains can appear finite, at least until either spouse's situation changes.

Women who head the household have greater decision-making power in income allocation towards food. One of the MBC women who maintains the farm while her husband is away driving, has complete control over the household's allocation of income. Even though this is within a restricted budget depending on what her husband sends home, she gives her father-in-law money and a list of groceries to buy for her and her two children. Women of other households where men are absent for several weeks at a time get their groceries from the local shop and ask a male relative or neighbour to buy what they need from the market. Although these women still depend on men to shop for groceries, the power relations are considerably different as the women give clear instructions on what they want to be bought and how much and give the men the exact money to buy those items. The men in Busby's (2000) fishing village were away at sea during the day, leaving women as the managers of household finances. For these women, the day-to-day management of money resulted in greater control and responsibility over household income, which occasionally came into conflict with the general ideology of women's submission to husbands. In Katuyanur, however, women who controlled household finances only had this control within the income limits provided and controlled by husbands rather than over husbands' entire earnings.

However, women heads of households' decision-making power in allocation of income towards food depends on the duration of men's absence and the ability of men to bring groceries home on a regular basis. Radha's husband is away from home for work most days of the month. On days he comes home, he brings food with him that should last Prema, Radha, and four young children through the next period of his absence. Although Radha tells her husband when they have run out of a particular food ingredient, she does not control what and how much he brings home, and in between his visits, Prema and Radha never buy food. In households where a son or husband comes home once a week or once every two weeks, women's decision-making power on income allocation towards food is as limited as in households where men come home every day after work. Women who head the household during longer absences of husbands, on the other hand, have greater bargaining power in income allocation towards food, sometimes even challenging their role of dependence as a daughter-in-law. Thus, the composition of the household, specifically the presence or absence of husbands and sons, plays an important role in women's control over income allocation towards food.

While intra-household income allocation in most households takes the form of a discussion between household members, bargaining power within these discussions is not identical for each

household member. So far, the discussion showed that intra-household bargaining power, while situational, relates to household members' (perceived) needs, the gendered division of household labour, and household composition. Two important indicators of bargaining power have been omitted in this discussion: ownership and control over land and paid labour.

8.2 Ownership and Control over Land

While bargaining over access to land between households was discussed in Chapter 5, the current discussion focusses on the role of land in intra-household bargaining. Fafchamps (1998) aptly points out that, although often used interchangeably, there is a conceptual difference between access to land within households and access to land across households. This is important, as section 5.2 showed that women rarely own land and supported Moser's (1993) argument that men and women both have access to resources, but men usually have this access independently whereas women often only have access to resources through men. Land is suggested to be one of the most important assets for women that directly benefits household food security because landownership increases women's bargaining power (Agarwal, 1994; Das *et al.*, 2013; Doss, Summerfield and Tsikata, 2014; Thomas, 1990) and women's increased bargaining power results in more of the household's income being allocated towards food and other household needs (Allendorf, 2007; Meinzen-Dick *et al.*, 1997; Quisumbing *et al.*, 1995; Rao, 2006; Rao, Pradhan and Roy, 2017; Sraboni *et al.*, 2014; Wiggins and Keats, 2013). The current discussion therefore investigates these links between landownership and bargaining power in income allocation.

Men and women in Katuyanur recognised several benefits of women's landownership. One of the benefits mentioned relates to women's well-being and safety within the household. A landless driver claimed owning land protects women from abuse because if a wife has valuable assets, a husband risks losing access to those assets if he abuses his wife, and she leaves him. Additionally, Pandi believed women who own land are treated better and more respectfully by her husband and family-in-law. In a report on gender-based violence in India, Kelkar, Gaikwad and Mandal (2015) do not find a direct link between women's landownership and reduced gender-based violence, but do argue that landownership benefits women's economic and social positions, which reduces gender-based violence in the home and in public spaces.

Another benefit, one more commonly identified by informants, is economic independence. Prema explained that "if a woman has land, she can take care of herself. If her husband leaves her. If she has no land, she cannot do anything." Similarly, an elderly landless ST woman and Anuja both argued that landowning women do not depend on men as they have their land to work on and to earn money from. Without land, women have to ask their husbands for everything. Not only women identified economic independence as a benefit from owning land. Pandi said that owning land provides women with a place to return to, to live and to have income or food from cultivation, if the marriage does not work out. These

villagers thus connected women's landownership with economic independence and consequently independence from husbands.

These accounts suggest that the importance of women's economic independence through landownership mostly relates to women in unstable households. Radha explicitly argued that a woman only needs land if her husband or children are not looking after her but added: "here we do not have any problem, here everything is good, so we [me and my mother] do not think about wanting land." Despite the risk of women losing access to their husbands' land in situations of widowhood or separation, as discussed in Chapter 5, women are rarely prepared for such situations by being provided with land to increase their economic security. The recognition of the importance of women's landownership for economic independence has not led to transferring *pattas* from a husband's name to a wife's name or to both their names, nor does intra-household bargaining take place over such a transfer.

The importance of social norms for women's position within the household is enormously clear here. Termination of cooperation in the form of divorce impacts men and women differently, as divorced women are not everywhere as able to remarry as men (Balasubramanian, 2013). Balasubramanian (2013) therefore argues that structural factors such as divorce laws and social norms play an important role in intra-household bargaining models. However, not only laws or social norms regarding divorce and remarriages play a role in Katuyanur, but so does the social stigma of divorce or separation. This social stigma results in women not preparing themselves nor their daughters for such situations. Despite women's insistence that landownership gives women economic independence, women who do own land, either housing or arable land, do not insist their daughters should inherit this land. Rather, they use the same arguments as everyone else; daughters should not inherit land because they move to a husband's home and get what they need through him. Parents consider their responsibility to arrange an alliance they trust will be good for the daughter, seeing this alliance as economic security instead of providing daughters with economic independence. Furthermore, even if women do end up in an abusive marriage, they rarely divorce or separate because of the social stigma for divorced or separated women. Indeed, divorce rates in India are extremely low. Pathak (2020) reports that in Tamil Nadu in 2011, approximately 8.3 in 1000 women were separated, and 1.2 in 1000 women were divorced, which is very close to the national divorce rate of 0.11% (Thadathil and Sriram, 2020).

Since women are in a worse-off position compared to men in situations of widowhood or a household break-up, the initiative to bargain over the ownership of the household's arable or housing land, to prepare for such a situation of widowhood or separation, is with women. However, villagers agreed that women should not ask for joint landownership, especially when her husband takes care of her. This is entirely in line with the social expectation described by Rao, Pradhan and Roy (2017) of men as providers and thus only when men do not perform their role as provider do women have a justified reason to claim an independent stake in their husbands' land. Ambika explained that the source of the household's land is

important in whether a woman can ask her husband for *kootu patta*, which is why Ambika herself cannot request joint ownership over the land her husband will inherit:

It is the land of my father-in-law and mother-in-law, therefore we put it only in my husband's name. If we buy land, then my husband may think about it [joint ownership] and buy the land in both our names.

Inherited land, or ancestral property, thus belongs with the patrilineage and should not be (co-)owned by a wife, while self-acquired property is not associated with ancestors and could therefore be registered as *kootu patta*, issued in both spouses' names.

Landownership thus contributes to a woman's fall-back position because it offers her opportunities for income generation and decreases her dependency on men, while her husband simultaneously depends more on her as he has access to the land only through her. However, the role of women's landownership in women's intra-household bargaining and decision-making over income allocation is less clear. On the one hand, Anuja argued that women should own land because during a fight between spouses it regularly happens that a husband tells his wife that she is living in his house, that he takes care of her, that he has land and is independent while she depends on him. If a woman owns land, she argued, she can stand up to her husband. This suggests that owning land does increase women's intra-household bargaining position. On the other hand, the women who own land did not experience any change in intra-household power relations. Rani, Jaya, and Gayatri all three became owners of housing land well after their marriage. Rani and Gayatri are the only housing *patta* holders in their households, while in Jaya's household her husband also owns housing land which he bought around the same time Jaya received her housing *patta* from the government. All three women argued that becoming the owner of housing land changed nothing in their relationships at homes. Rani argued that in Katuyanur only men make decisions in the household, regardless of whether women own the household's land. Women's landownership is thus not accompanied by an experience of greater bargaining power in intra-household decision-making on income allocation, despite women's improved fall-back position.

Rani, Jaya, and Gayatri did not own arable land, only housing land, so perhaps women who own arable land have a different experience. As discussed in section 5.2, only four women, one deceased, within the 20 interviewed households owned (part of) the household's arable land. The literature suggests that women's landownership has a positive impact on household food security. Indeed, Table 8.1 shows that among the surveyed households, all households with small and big landholdings owned by women or jointly by spouses were food secure, although this were only three households in total, it is much higher compared to the overall percentage of food secure households with small and big landholdings (44% and 70% respectively). Similarly, for households with marginal landholdings owned by women or jointly by spouses (eight households in total), a higher percentage is food secure (50%) compared to households with marginal landholdings overall (24%). The number of households where women owned agricultural land,

either alone or jointly, is very small, so the results should be interpreted with caution, but it does suggest that households where women own land do better in terms of food security compared to households where women do not own arable land at all.

		Food Secure	Mildly Food Insecure	Moderately Food Insecure	Severely Food Insecure
Woman Landowner	Marginal	50	0	0	50
	Small	100	0	0	0
	Big	100	0	0	0
All Landowners	Marginal	24	10	14	52
	Small	44	0	28	28
	Big	70		10	20

Table 8.1 Household food security among the surveyed households in percentages.

As discussed in previous chapters, access to land can consist of various combinations of rights derived from this access, i.e., entry, withdrawal, exclusion, management, and alienation, and within these bundles of rights there are important variations among household members. The role of land in intra-household relations of power mostly centres around management and alienation rights, although land sales do not take place frequently in the village, and how benefits derived from the land are allocated towards command over food.

At a first glance, bargaining over access to land within households appears rare as villagers consider land, whether for agriculture or for housing, a household asset, despite the government's view on landed property as individually owned with *pattas* issued in individual names. This is not uncommon as Rao, Pradhan and Roy (2017) found in several field studies that men and women perceive household land as joint property and Bromley (1989) argued that individual private land can in practice be administered by a group, which could be a household. Indeed, the evidence in this study suggests that a household's property, which is owned individually by one household member, is in practice managed as common property. Informants are indifferent to whose name is on the *patta*; household members refer to land as 'our land'. The prevalence of transfers of arable land or housing land to a wife or daughter-in-law, to become eligible for government schemes, supports this perception; if men considered land their individual property, they would be less willing to transfer the *patta*. A Malayali woman explained she is unconcerned with their 2 acres of land being registered in her husband's name because "we only have a little land; regardless on whose name it is, we struggle in the same way." Women's lack of concern about not owning land is thus based on the view that an intra-household transfer of ownership does not increase the household's entitlement set. The housing *patta* issued in Rani's name was allocated by the government, but Rani is impartial to her legal status as owner. She argued the housing land is hers as well as her husband's, so it does not matter in whose name the *patta* is issued. Kumar sees his household's arable land as 'theirs' because they separate nothing and a happy couple does not see land as 'his' or 'hers', but

everything is 'theirs'. Villagers thus consider a household's arable land and housing land common property, belonging as much to the *patta* holder as the spouse.

Household members may not bargain over landownership as they consider it 'their' land, but that does not imply that every household member can equally participate in land-alienation decisions. Among the 103 surveyed households, 11 had sold land in the past and these decisions were made by husbands alone. Anuja will consider the land her husband will inherit as her land, but any decision on selling the land is up to her husband. She argued she will have no say in it since her husband inherited the land from his parents. Thus, even though she feels that land her husband owns belongs to both her husband and her, a decision to sell the land they do not make together. Women who own land, however, have greater control over what happens to the land. These women can decide who will inherit the land, including a daughter, something women have no influence over if the land is in their husbands' name.

The right to alienate is not the only difference in household members' respective bundles of rights. The effects of the distribution of management rights within the household are crucial for household food security as management rights play an important role in food availability through production and in income generation. Women have a larger role in land management compared to land alienation. Decisions on how to cultivate, what to cultivate, and when, relate to household food security in two ways. First, what farmers cultivate they can consume, and second, what farmers cultivate they can sell and use the income to buy food. As was the case in Finnis' (2006, 2007) study in the Kolli Hills in Tamil Nadu, preference in cultivation decisions are often based in part on farmers' values related to material commodities and educational aspirations; making a profit is important. Therefore, farmers always cultivate commercial crops, often combined with subsistence crops such as paddy, pulses, or millets. Cultivation preferences do not differ between men and women. Every farmer, man or woman, prefers to cultivate at least part of the land with crops for their own consumption. Gayatri cultivated tapioca and *solam*, both for sale, because she did not have access to water to cultivate subsistence crops alongside the commercial crops. Prema cultivated tapioca and groundnut for the market and *solam* as feed for their cows. In farming households, household members discuss what to cultivate; they discuss crop prices and water availability, based on which they decide.

Among the Malayali in the Kolli Hills, decisions on crops to cultivate are mainly made by men (Rengalakshmi *et al.*, 2006). In Katuyanur, those involved in decision making on which crops to grow depends on the distribution of the farm work among spouses. In five of my informants' farming households, women do the majority of the farm work. One of these women, Prema, usually gives the first suggestion on what to cultivate in their 1.5 acres of land and if the others do not agree they discuss it. Gayatri, when she still had access to her mother-in-law's land, did all the farm work and farm management; she hired wage labourers when needed and decided what to grow. Amudha, whose husband cannot work, makes the cultivation decisions. She talks about it with her husband, but he agrees with whatever she

suggests. These three women, as sole farmers within the household, thus hold a bundle of rights that includes management despite not owning the land. However, not all women whose labour contribution to the farm is greatest of all household members control what they cultivate. An MBC woman cultivates 1.5 acres of land while her husband has a full-time job outside the farm, but her husband decides which crops to grow. Another MBC woman cultivates 1 acre while her husband is away driving, but her father-in-law, who lives next-door, decides what she should cultivate. The woman argued her father-in-law knows best what grows well, so he tells her what to grow, but the expenses to invest are for the woman and her husband, as is the income. Women who are the main farmers, either due to absence of husbands or a husband unable to work, hold a greater bundle of rights, one that includes management, compared to women farmers who are not the only farmers within the household.

In households where men and women both contribute their labour to the farming, women do not have management rights. In an ST woman's farming household, the father-in-law decides everything relating to the cultivation of their 2 acres, even though the woman and both parents-in-law share the total labour effort. In Kumar and Anita's farm, they divide the labour, which according to Kumar requires no study or knowledge, yet the type of work is decisive: "Yes, we divide the work. Women's work only women do; men's work women cannot do." The gendered division of labour not only relates to the physical farm work but also to managing the farm; Kumar decides what to grow. A Malayali farmer believed it would not make a difference if she would own their household's land because her husband is the household head, knows things better, and would continue to make most decisions. This does not imply spouses do not talk about farm management but discussing is not the same as deciding and the latter is done by men. First discussing it thus gives the impression women can decide as well, while at the same time, if the decision backfires, the men could say it was a mutual decision and thus both are to blame. Labour contribution may not equal the weight of participation in decision-making, but women who farm alone have greater control, more bargaining power, over cultivation decisions.

Women have more control over farm management when they are the main farmers, but farm management is less related to landownership. Four women in this study had land *patta* issued in their name. As an only child, Pushpa inherited her father's land. Pushpa had already married when her father died and her husband, who had moved into Pushpa's home after their marriage, took over the running of the farm which is now in control of her sons. Pushpa may have inherited the land, but her landownership was only on paper; she never controlled nor managed this land. Communicating with the elderly Pushpa was impossible at the time of fieldwork because of her deafness, therefore I do not know how she herself perceived her ownership, management, and control over the land. The two other women with land *patta* issued in their names likewise lacked the right of management over the land, which stayed with the household member who gave part of his land to become eligible for government schemes. Thus, after an intra-household transfer of land *patta* from a man to a woman, the woman's bargaining power in

cultivation decisions over that land does not increase; her right to manage the land is equal to before she owned the land.

Women and men both prefer to grow a combination of subsistence crops and commercial crops, but women's involvement in commercial crops is far less compared to men due to a gendered division of labour in which men take all responsibility for marketing the commercial crops. While subsistence crops never leave the farm, commercial crops are sold in the market, which is the domain of men. None of the women farmers in Katuyanur ever leave the farm to sell their crops. Pandi considers his widowed mother the head of the household who decides what to grow in their fields, but he makes the decisions on when and where to sell the crops and he collects the earnings from the sale. In the three farming households headed by women due to (temporary) absence of husbands, the women are in charge of the day-to-day cultivation activities and do most of the farm work, but men decide when to harvest and sell the crops. Women's greater role in cultivation of subsistence crops compared to men and women's smaller, or absent, role in money transactions was also emphasised by Rengalakshmi *et al.* (2006) and Kumar-Range (2001) for Malayali women in the Kolli Hills. Women farmers thus are not rewarded for their labour contribution and land management, while men are rewarded with the earnings from the crop sale, sometimes even without contributing their labour. Some women find a way to sell their crops without going to the market. Amudha sells their tapioca to a mill that sends agents to farms to arrange a procurement, which includes the tapioca harvesting and the transport of the harvest to the mill, so Amudha never has to leave her farm to make a sale. Gayatri sold the *solam* to local people who keep cows, while her sons took the other crops, such as tapioca, to the market. The division of labour, based on on-farm/off-farm activities, thus results in the appropriation of women's labour by men. Women farmers thus benefit from agents who procure harvests directly at the farm, as women neither need to challenge the male domination of the market, nor rely on men to do the sale for them.

Implements for cultivation are bought by men, as this activity also requires leaving the farm. The few women who manage a farm rely on men to buy seeds or chemicals, usually a father-in-law, son, or neighbour. Gayatri's sons never worked on the land, but they always bought the chemicals and other implements needed for cultivation. For the spraying of chemicals, Gayatri hired labourers, although she argued she knows how to spray and would have done it herself if she had the spraying machine. For a few crops, such as paddy and groundnut, farmers do not buy seeds but use seeds saved from the last harvest. The Agricultural Department also offers various seeds against subsidised prices. Amudha does not have to go out to buy seeds since they save seeds from the previous harvest. One of the three MBC women in charge of the daily farm activities gives her father-in-law money if she needs any seeds or chemicals, and he buys it for her. Although she depends on her father-in-law to buy what she needs and to decide what to cultivate, her heading the farm altered a traditional relationship between herself and her father-in-law as she does not rely on his money; she keeps her own economically independent household. For the work

she cannot do herself she calls and pays labourers. The husband of one of the other three MBC women buys what the farm needs before he comes home from his non-agricultural job. Even though Vijay believed women's landownership is beneficial for the household's future, he simultaneously argued it is more practical if men own land since women do not go anywhere outside the home; men have to arrange everything needed for the land and the home, such as loans, subsidies, and certificates. Men who own the land can do everything necessary without having to take their wife with them. Vijay thus suggests that women who own land still rely on husbands to arrange loans and subsidies, so women's ability to control the land is limited and women's landownership hinders effective farm management and livelihood maintenance. The off-farm domains thus remain in the hands of men, even for farms where women are the sole farmers.

Perceptions of land being 'ours' thus does not implicate that farm management is equal among spouses. Bargaining power over cultivation decisions is neither related to landownership, nor to labour contribution to the farm. Men's bargaining power over farming decisions remains greater compared to women even if women own the land or if her labour contribution is equal to her husband's. Only women who head the farm have greater bargaining power relative to their husbands in farming decisions, despite not owning the land. The gendered division of labour nevertheless restricts women from controlling every aspect of farming because off-farm activities remain men's domain. The marginal farms in this study were most likely to be headed by women since the land size is too small for subsistence and husbands needed to find employment to add to the household's income, leaving the daily farm activities in the hands of the women, unless parents-in-law were living in the same household or nearby. Larger farms require more than one farmer, and thus in these households it is more likely that men stay at home to farm, in which case women have little input in farm-related decision-making. In bargaining about land management, the collapse of a household is not a realistic outcome if they cannot make a compromise. Therefore, a shift in landownership does not result in a shift in relative bargaining power, as men who lose the *patta* do not lose bargaining power in land management. Land *pattas* issued in women's names thus do not increase women's control over land compared to households where men own the land. Therefore, a woman's bundle of rights in the household's property is weaker than her husband's, even for women who own land, as the bundle of rights is closely associated with a gendered division of labour.

Sen (1985) argued that resource distribution within sets of relationships represent relative power and that this principle is the basis of bargaining or cooperative conflict. However, the evidence presented here shows that women's increased landownership does not necessarily result in women's increased intra-household bargaining power as women's gain of landownership was mostly a side effect of government policies. If the distribution of natural resources is only an instrument to obtain other entitlements, the importance of resource distribution in bargaining power, or position in cooperative conflict, may be considerably less than Sen (1985) and Agarwal (1994) had argued. Furthermore, intra-household

bargaining over control over land is thus an exemplary form of a patriarchal bargain (Kandiyoti, 1988) in which men's control over household land is assumed and normalised by all parties (within and beyond the household), thus limiting women's options for control. Consequently, differences in bargaining power between household members should be sought in management or alienation rights, or both. As discussed in section 5.4, the importance of recognising the 'fuzziness' of property relations is crucial in understanding the different bundles of rights held by different household members over the same property, which results in intra-household power differences which in turn affect bargaining power in other areas, such as income allocation. Simultaneously, the 'fuzziness' of property relations problematises the common argument that landownership empowers women, as women may own land, but not actually manage and control the land.

8.3 Paid Labour

The second important indicator of bargaining power omitted in section 8.1 is paid labour. Employment or other income earning means play an important role in fall-back position and bargaining power (Agarwal, 1994; Deutsch, 2007; McElroy, 1997; Rao, 2014). Indeed, men and women both justified men's greater role in decision making based on men's greater financial contribution to the household income. Gayatri, for example, explained that her sons make the decisions at home, since they are the ones who earn money, and Gayatri accepts these decisions. Similarly, Apsana justified her husband's dominant role in decision-making as a logical consequence of her husband working every day for the well-being of the household, but she simultaneously expressed that she should be more involved in decision-making than she currently is. Men's greater contribution to the household's income is used to justify unequal decision-making, even though bargaining power in decision-making is not proportional to contribution. For example, Sethu does not have paid employment; his household depends on the income from the shop, with Rani as shopkeeper, and on the salary earned by their eldest son in Kerala. During my fieldwork their son came home for several days and got into a fight with his father because he had loaned one month's wages to a friend instead of bringing it home. Rani was present during this argument, but she kept silent. While the son had earned the money, apparently, he should not have decided on how to use his earnings without consulting his father. This suggests first that the father has greater bargaining power regarding income allocation than both the son and the mother, despite contributing the least to the income, and second, adult unmarried children, even if they contribute their wages to the household income, have little bargaining power when it comes to income allocation. One Malayali woman observed that in households where women's income exceeds men's income, women have greater involvement in decision-making because with their own income they need not depend on husbands. Within the 20 interviewed households, 15 women, all Malayali, have paid work. These 15 women belong to 13 different households, but only in Amudha's household is her income the household's main income and only Apsana considered her own income and her husband's income to contribute equally to the household's total income. While Amudha is the household's primary earner and decision-maker, Apsana's husband decides everything at home, despite their equal financial contribution.

Women's relative contribution to the household income is thus not equivalent to their relative intra-household bargaining power, but that does not mean that a change in income contribution has no influence on bargaining power at all.

In the introduction to the current chapter, it was argued that bargaining and bargaining power is situational. In reference to women's increased fall-back position through increased earnings, McElroy (1997) argued that women's increased economic independence increases household welfare, but that this is only visible in long-term decisions, such as allocation of labour, fertility, health, and children's human capital. This suggests that an improvement in fall-back position through increased economic independence does not necessarily result in greater bargaining power in every bargain and decision that can be made. Furthermore, section 7.2 discussed the gendered wage gap in agricultural wage labour and I argued that this was directly related to unequal values attributed to women's labour compared to men's labour. Rao (2014) takes this a step further and argues that low wages devalue women's labour and their labour time and consequently work can become oppressive for women rather than empowering. Dasgupta (2016) made a similar conclusion based on a literature review; that women's absolute earnings do not impact bargaining power, while a decreased gender wage gap positively influences women's position within the household. This suggests that the relationship between women's independent income and their bargaining power is more complex than a linear reinforcing relationship.

For the households in Katuyanur there are roughly two types of earned income: common earnings through cultivation and independent earnings through employment. This distinction is potentially crucial in the analysis of intra-household bargaining power, as Rengalakshmi *et al.* (2006) found that Malayali women in the Kolli Hills can control and manage their independent earnings, but the household's common earnings are controlled and managed by men. In farming households, spouses pool their labour to cultivate their land and earnings derived from that cultivation could be considered as common earnings. However, in one MBC farming household, both husband and wife cultivate their land, but the woman does not recognise herself as a farmer and considers only her husband as earning an income. Even though they pool their labour to cultivate, she considers the income derived from their pooled labour her husband's income, who can consequently decide what to do with it. Thus, despite the financial contribution women make to their households, men appropriate their common income and continue to make the decisions on how to allocate that income.

In households with access to arable land, women, especially BC and MBC women, are less likely to have independent income through wage labour, as discussed in section 7.2, compared to women in households without access to land. While women in Katuyanur could spend some of their independently earned income, most of their earnings was added to the household's pooled income. Santhi and her neighbour, both middle-aged landless women who retired from agricultural wage labour, explained why they always gave their wages to their husbands:

Santhi: We then gave everything, the salary I got, that money I gave to my husband.

Neighbour: Why? He said give it to me, I will go and buy things with it. When you keep it for yourself what are you going to do with it, he will ask.

Santhi: What the household needs, he buys.

Indeed, none of the women engaged in paid labour for the purpose to support their own personal purchases. They all worked to pay for household necessities such as food and paying off loans; they worked to fill their households' income-expenses gap. This was no different from men, who are considered and consider themselves the main breadwinner. Kabeer (1997) saw a similar scenario in Bangladesh, which resulted from a notion that men and women within the household form a cooperative unit; in income management as well as income allocation, but presents a different picture to what Kapadia (1995) observed in South India with men only contributing a portion of their income and only on an irregular basis.

Women without paid work, and thus without independent income, experience less participation in income allocation decisions compared to women who do engage in paid labour. For example, Anuja does not have paid work, which her husband uses as justification for not discussing expenses with her. When her husband suddenly bought a new phone, she did not ask him why he had not discussed it with her first, because he would have responded he bought it from his salary, so he does not need to ask her for permission. Anuja, on the other hand, could never just buy a phone herself, if she would do that, she 'cannot stay in this house' anymore. She was very explicit about the inequality in decision-making at home:

If I ask for something and my husband says no, and I ask why not, he says, if I say you are not buying it, you are not buying it. I do not need to give you a reason. Whatever I say you have to listen, whatever you say I do not listen to.

Thus, while women do not increase their personal spending when they earn their own income, it does give them some sense of power as they do not need to ask a husband for money if they do need it.

Women consider it important to have their own income, not only to have independent access to money but also to increase the household's total income, but not many women in Katuyanur are employed outside the village in non-agricultural sectors that pay higher and more consistent wages compared to agricultural wage labour. Informants gave two main reasons for this. First, the gendered division of labour in which women are responsible for all (unpaid) household labour. A cooperative household depends on household members working together, dividing their pooled labour. However, as Busby (2000) aptly observed, "men and women take on quite distinct roles in the economy, and rarely combine their efforts on any one task" (2000, p.153). Households in Katuyanur generally operate through a strict gendered division of labour. Saravanan explained the household's gendered division of labour as one based on proximity to the home: "housework is done by those who are in the home. Cleaning the house, cooking, laundry, all are done by the women. I go outside to work; I do not do the housework." Vijay made a similar

argument: “women do not go [outside for work], only men can go. They [women] stay home and look after things here [at home].” He elaborated that he and his wife are both responsible to earn enough money to buy what they need, but there are differences in labour responsibilities:

Washing clothes my wife does, getting vegetables and cooking she does. I buy [vegetables] also, but there is a vendor coming here [near the house] to sell, she can buy it here. For soap, everything a vendor comes here to sell. I buy oil, dhal. If we do not have enough vegetables, I go outside to buy it. For buying agricultural things I go.

Kumar argued women have few responsibilities; he is the one who buys whatever they need at home. The only responsibilities women have, according to him, relate to agriculture; to take over the work on the fields and the livestock when he is not at home. Spouses are both responsible for maintaining the household, but divide responsibilities based on proximity to the house. Women’s responsibilities cover everything they can do from the home, which includes labour on their own fields or wage labour on nearby fields, while men’s responsibilities cover everything that takes place outside the village.

Busby (2000) argued that marriage can be a first step for women’s independence as it provides women’s first opportunity to earn their own money. While indeed few unmarried women, who were no longer in school or college, engaged in paid labour, marriage puts new restrictions and responsibilities on women that restrict their opportunities of independently earning money. Rani wanted to join the group of women in working in the incense factory, so Rani mentioned the work opportunity to Sethu. He told her, however, not to go because the salary was low and because the commute would leave her without time to do the work at home such as cooking and laundry. Rani did not argue with Sethu and thus even though they talked about the opportunity, it was Sethu who decided how Rani should allocate her labour. Similarly, Anuja wanted to work in the nearby town like she had done before her marriage, but her husband does not want her to. He does not object to her working, but he objects to the working hours as working in the town would mean that Anuja will come home late in the evening and not have time to prepare dinner. Jaya’s husband, Mohan, claimed women want to work, but women staying at home do so because a husband tells them to stay and look after the home and cook. Thus, changes in women’s labour allocations outside the home can only take place if these changes do not affect women’s labour allocation within the home.

Responsibilities at home include care for livestock. Raising livestock requires investment of time and labour, and therefore households in Katuyanur rarely engage in full-time animal husbandry. Instead, keeping livestock has become part of non-paid household work: women’s responsibility. Women’s responsibilities for care of livestock interfere with paid labour opportunities. An MBC farmer always stays at home because she has to look after the cows. No one else is at home during the day, therefore she has to feed the cows and milk them twice a day. If she would work outside the home, someone else has to take over her task of looking after the cows. For a similar reason, Jaya, who spends three hours each day taking

care of her household's bullock, did not join the group of Malayali women to work in the incense factory in Salem. Bhandari (2017) refers to studies from various parts of the world that show women continue to be responsible for household work in addition to their paid labour. Women's labour allocation and responsibilities for household labour are thus not open for bargaining.

This gendered division of labour does not imply that bargaining over labour allocation does not occur. Husbands are reluctant to do any housework, but women do not always accept this; Rani was eating her breakfast when Sethu called her to iron his shirt. She replied he should do it himself because she was eating. Several minutes later she saw him ironing his shirt and when he complained about this, she replied he has nothing else to do, only watching TV, so he can do some work himself. However, this example relates only to one specific moment; it is not a bargain about long-term labour allocation in which Sethu continues to iron his own shirt in the future. More long-term bargaining over labour allocation takes place as well, as households constantly try to improve their economic situation, mainly by changing employment. Women's labour allocation is also open to bargaining, as households discuss women's labour opportunities and women sometimes take up new labour opportunities. As already raised several times, a group of seven Malayali women, all agricultural wage labourers, took up working in an incense factory in Salem because agricultural wage labour opportunities were scarce. These seven women arranged transport to and from the factory as a group, but they only lasted a little over one month working in the factory as they found it too difficult and exhausting to combine it with their household work, so they all stopped going. The gendered division of labour making women solely responsible for the work inside the house thus affects women's control over their own labour, inside and outside the home. Women only control their own labour within set boundaries that ensure the general division of labour remains unaffected. The gendered division of labour restricts women's labour opportunities and demonstrates women do not have an advantageous bargaining position to change the current division of labour, nor to increase control over their own labour.

A second reason why women are rarely employed outside the village is that social norms and ideas about appropriateness result in husbands not allowing women to take up such employment. A 34-year-old Malayali woman was the first in the village to complete higher education and now teaches at the local *Anganwadi*. She explained there are only very few work opportunities for women within the village, but there is work available in mills and factories in nearby towns. However, barely any women from Katuyanur work there. According to the 34-year-old woman, this is not because women are uninterested in working, but because they can only go if husbands allow them. She elaborated saying that husbands do not like their wives to work outside the village as they fear the women will interact with unrelated men. Husbands do not have this fear when women work as agricultural wage labourers since this is inside the village and, according to the Malayali woman, women do not make the same effort to dress up compared to when they leave the village for work. Indeed, other women who worked within the village boundaries as an agricultural wage labourer did not consider going to work as going 'outside'. Such a difference of inside and

outside was also found by Busby (2000), but in her research location this difference was more clearly associated with the house rather than the village. A gendered division of labour based on inside/outside the home thus is not a strict dichotomy, as the village can be considered 'inside' for employment purposes. Dube (1997) identified a clear distinction between working in one's own field and working for wages. This was also the case in Katuyanur as women from poorer households were more likely to work as agricultural wage labourers compared to economically better-off women. Therefore, Heyer (2014) argues that withdrawal of women from agricultural wage labour is not necessarily the result of increased patriarchal restrictions, but due to economic betterment. Similarly, Rao (2014) emphasises that women's entry into the paid labour force can be a sign of devaluation, lowering the women's social status rather than a sign of increased gender equality. While the majority of the women in Katuyanur did participate in paid labour to increase the household's total income, the withdrawal of women from agricultural wage labour in Katuyanur was not a choice made by the women themselves. Prema and her daughter Radha explained how women's labour participation is entwined with perceptions of appropriateness. The two adult men in their home do not allow Prema and Radha to work anywhere other than on their own land. The two men would say 'why would you go? Here there is enough work. You have the cow to look after.' Radha argued this is not actually about the cows and their workload at home but "we are not supposed to go outside, which is why they bought the cow so we can earn from the milk." The men increased the women's labour at home to give them some extra income, while simultaneously arguing the women have too much work at home to earn money from wages. The men thus changed the conversation from a bargain about social norms regarding women's mobility to a bargain about responsibilities within the home. As discussed in section 7.2, the three MBC women who used to work as agricultural wage labourers all stopped doing so after their family bought cows and the women consequently needed to stay at home to care for the cows rather than work for wages. Thus, the withdrawal of these women from agricultural wage labour was directly related to patriarchal restrictions and social norms and shows there are differences in women's opportunities even within societies and across communities.

A third reason for women's lack of participation in employment outside the village is women's restricted mobility. As section 8.1 discussed, women in Katuyanur rarely own their own vehicle and rarely know how to ride a bicycle or drive a scooter. Women thus depend on men to get to the nearest town. Ramberg (2013) wrote that women's mobility "is subject to male prerogative" (2013, p. 665), an observation identical to women's mobility in Katuyanur. Many women, except college graduates, have never left the village on their own and feel insecure to go out by themselves. They fear not to know which bus to take, where to eat, or what to do if there is a problem. Rani confirmed that women do not go anywhere alone but also insisted that they are not interested in doing so. She argued everyone in the village is a relative so there is always a man with a motorbike to take women wherever they need to go, so women do not need their own transportation.

Simultaneously, women's limited mobility restricts their exposure to the outside world, a feature that informants argue is important for knowledge generation. Informants perceive men and women as equally intelligent, but knowledge is gendered and influences decision-making. Each person is considered an expert in his or her own field; men have greater knowledge about the world outside the village, while women know more about the world inside the village and inside the household. Restrictions on women's mobility apply not only to women and labour but also to girls and studying. Priti criticised local attitudes against girls pursuing higher education: "my daughter wants to study for a degree, to go out [of the village] for that. I want that for her, but here in the village people think different, that girls should study only a little. So, they [villagers] look at us in a way I am not happy with." The Malayali woman working in the local *Anganwadi* argued men use restrictions on girls' education to restrict women's labour opportunities outside the home. She emphasised that men use their higher educational attainment to justify their control over decision-making. Restricting women's education leads to restricting women's opportunities for economic independence and keeping women dependent on and submissive to husbands. She struggled with this strong ideal of a submissive, dependent, and immobile wife herself when she wished to continue her studies after marriage, a struggle which involved not only her husband, but the extended family:

I finished +2 [year 12] and then got married. After that I continued studying. In this village they do not allow anyone to study after marriage. After marriage many people said they do not want that. My relations and everyone, they said: you are not allowed to study.

She concluded she was lucky her husband allowed her to continue studying, despite the objections from their relatives in the village who argued that if he allowed her to study, she would not respect him. This indicates that education has the potential to increase bargaining power, directly and indirectly by increasing employment opportunities, but also that decisions which are presumably made between spouses involve the larger community who want to ensure social norms do not change. This Malayali woman does notice a slow change; husbands and parent-in-law still object to women working outside the home or village, but women increasingly obtain degrees in higher education now and do work outside the village.

In general, men thus continue to make the greatest financial contribution to the household, which has a great influence on their bargaining power in income allocation. Although there is a constant exchange between the individual and the household, the gendered division of labour often results in men appropriating women's labour, especially since women have lesser decision-making power on income allocation compared to men. Women have little control over their own labour, which is maintained through the gendered division of labour with women solely responsible for work in and around the house. However, since this area includes most of the village, women are less restricted to work as agricultural wage labourers, as long as they are home in time to prepare dinner. For labour outside the village, women cannot decide for themselves whether to take up a job opportunity. Men are not comfortable with women working

outside the village and use the excuse of women's responsibilities at home to restrict them. This means that increasing women's economic independence within a strict gendered division of labour is challenging. While McElroy (1997) argued that women's independent earnings result in women's greater decision making in labour allocation, the evidence presented here shows that labour allocation is actually preventing women from taking up paid labour and women who do have independent earnings still have little power in bargaining over their own labour allocation and over the labour allocation of spouses. This suggests that intra-household labour pooling is inefficient, signifying a household management structure of non-cooperative bargaining, since a change in women's labour allocation towards paid labour would increase the household's total resources without increasing men's labour allocation (unless men take up more household labour). At the same time, women's independent income does have a significant effect on their bargaining power in income allocation, an effect that is absent when it comes to women's common income. Thus, while allowing women to take up employment would increase the households total pooled income, it would require a trade-off in men's bargaining power in income allocation, social norms regarding appropriateness, the distribution of household labour, and women's mobility.

8.4 Intra-Household Food Allocations

A household may be food secure, but food allocations among individual household members may not be equitable or equal. Harris-Fry *et al.* (2017) identified eight factors for intra-household food allocations; 1) relative economic contributions or physically strenuous work, 2) cultural and religious beliefs about food properties and eating behaviours, 3) relative social status within the household, 4) beliefs that everyone should be given their 'fair share', 5) decision-making, social mobility, and control over resources, 6) bargaining power, 7) food as a means to establish and reinforce interpersonal relationships, and 8) individual tastes and preferences. As discussed in previous sections, the third, fifth, and sixth factors largely overlap.

Other than differences in food preferences, depending on variables such as age, gender, and labour activities, different household members have different food requirements. As discussed in section 6.2, households in Katuyanur have enough food for every household member; no one routinely eats insufficient amounts of food. Intra-household food allocation is according to needs, decided by each household member themselves, which influences the quantity of food but not the type. Every household member eats the same kind of food, as women cook one dish for the entire household. Only in a few households do health reasons, particularly diabetes or high blood pressure, result in adjusted cooking for a particular household member by substituting rice for millets.

A household member who absorbs the shock of food shortage could indicate that this household member's bargaining position was not favourable enough to secure a sufficient proportion of the household's food resources. On rare occasions, if the prepared food is insufficient for every household member, each adult eats a little less, or more likely, women cook additional food, even if only rice. Children,

however, never have to eat less than they need. Informants stated they feed children first and divide the remaining food among the adult household members, even if there is only a little food left. Indeed, children appear to be the only household members who receive preference in intra-household food allocations. Saravanan explained they rarely buy expensive food items, but if his grandchildren ask for something, he finds it hard to refuse. He never spends money on food just for himself, as for that same amount everyone can eat something simple. He only buys things everyone in the household eats, or something special for the children.

Women generally eat last and less than men but not because there is not enough food left; they eat as much as they want but simply require less. Women engaged in agriculture, as wage labourer or farmer, argue they have to eat as much as they need to do the agricultural work. Household composition thus plays a role in intra-household food allocation with children given priority, but gender is irrelevant. Intra-household food allocation in Katuyanur thus ensures no particular household member absorbs the shock of food shortage. If a food shortage presents, adult household members share this shock.

Intra-household food allocation does not structurally prefer one household member over another and may appear equitable among household members, but that does not imply every household member always eats the same. Differences in mobility between men and women result in differences in food consumption. Men regularly go into town for work or leisure where they have a meal, tea, or a snack, while women rarely eat outside the home. Rani's two sons occasionally drive to the nearby town if they want to eat fried chicken from a road stall. Their sisters never join them, nor do they bring any chicken home for them. This could result in a gap in protein intake between brothers and sisters. Work also results in different food consumption between household members. Saravanan often has his lunch where he works instead of at home: "If I go outside, for work, they give me food there." Agricultural wage labourers come home for lunch when they work nearby, but if not, they pack lunch which they share with the other labourers. Intra-household food allocation thus may differ from household members' food consumption.

8.5 Conclusion

Intra-household allocation of resources relates to a cooperative household with a gendered division of labour. The cooperative nature of households implies that a shift in the division of labour among spouses results in a shift in workload for both spouses. In a cooperative household with efficient bargaining outcomes, women's increased bargaining power may increase the income allocated to the household or to herself but has to be accompanied by a decrease in men's individual allocation. However, as Munro *et al.* (2014) also argued, women gaining autonomy does not necessarily reduce efficiency in a bargaining outcome. In a cooperative model, such an increase of women's autonomy that does not reduce efficiency requires an overall increase in resources (either labour or income). Non-cooperative bargaining, on the other hand, can include pooling but the allocation of resources is not efficient, i.e., there are alternative outcomes that would benefit every social actor better. This chapter has shown that the strict gendered

division of labour often results in non-cooperative bargaining when it comes to the allocation of women's labour as there are alternative labour allocation options available for women that would not impact the labour allocation of men.

More specifically, women's labour allocation outside the household is flexible but limited by the rigid expectation of women's responsibility for household labour. Women depend on men for any activity taking place outside the village due to women's restricted mobility. Even if women's intra-household bargaining power in farm management, income allocation, or labour allocation strengthens, restricted mobility maintains their dependence on men. The division of labour in Katuyanur thus takes a similar direction as Kabeer (1990) describes for women in Bangladesh; women farmers contribute their labour to the cultivation while the sale of the harvest is the domain of men, and thus men appropriate women's labour. Even women who head the farm are not rewarded for their labour as men continue to sell the crops and collect the earnings without putting in labour. Women's farming labour as endowment thus provides fewer entitlements compared to men's farming labour. Some men even get the entitlement without the endowment.

However, men collecting the agricultural income is not always appropriation of women's labour because households pool resources, including income. Rather than one household member appropriating the labour from another household member, there is a constant exchange between the individual and the household. Indeed, as Katz (1997) argued, it is possible for a unitary model, cooperative model, and non-cooperative model to coexist within a single household, depending on the type of resource that is allocated. While the allocation of labour may resemble a non-cooperative model, the allocation of income takes more after a cooperative model. A husband takes the household's pooled earnings to the market, a bank, or moneylender to pay off loans and brings the remaining money and the food/decreased debt back to the household where it benefits everyone, not only the husband. Groceries are brought into the kitchen, a woman's domain since she does the cooking, but the food never become hers or her husband's. A gendered division of labour is not inherently bad for women. Increased mobility for women, for example by going to the market herself and decide how much food and which foods she buys, may not be perceived as empowering by women as it increases their responsibilities and time burden, and as long as going to the market remains perceived as a task for men, women may not consider this gained mobility a freedom but a burden of unwillingly challenging social norms.

Household members make different contributions to the household's total income, but contribution does not equal decision-making power. Women are involved in intra-household decision-making regarding income allocation, albeit with a lower bargaining position relative to men. Men dominate decision-making within the household which they justify by their (perceived) greater contribution to household income. Women have a limited ability to increase their actual contribution because men control their labour allocation. Women's employment outside the village interferes with husbands' expectations

that women are responsible for the work within the household, and women's considerably lower wages make it impossible to compete with men's income contributions, even if women put in more labour hours. Rather than the actual contribution in terms of wages, labour, and time, decision-making power results from social norms regarding gendered responsibilities, and a gendered division of labour. Women's desire to take on a greater role in decision-making does not imply they want greater responsibilities. This does not mean contribution is irrelevant; women's income, from farming or paid employment, increases their economic independence and allows women to decide on small expenditures. Women's labour may not always be appropriated by men, but men unquestionably control women's labour, which affects women's decision-making power as women continue to depend on men. Men's control over women's, and children's, labour thus functions as insurance for greater control over intra-household decision-making.

Women's landownership plays only a marginal role in women's decision-making over income allocation. Social actors in intra-household relationships do not function as individuals trying to maximise their own benefits, rather, households cooperate and pool resources. This includes land; households consider land common property rather than an individual asset. However, not every household member has an equal bundle of rights, nor are their bundles of rights permanent. Rather, there is a 'hierarchy of rights' (Maine in Goody, 1998). The women in this study who own arable land do not hold a bundle of rights that includes management, unless a husband is absent. Land *pattas* issued in women's names do not increase women's control over land compared to households where men own the land. The gendered division of labour continues to downplay women's contributions to farming and to the farm's income. Despite the abundance of literature suggesting that landownership, especially over arable land, empowers women by gaining a more advantageous bargaining position within the household and the community, the women in Katuyanur do not experience this themselves. Furthermore, although ownership over arable land or housing land provides women with a stronger fall-back position in case of a collapsing marriage, day-to-day decisions do not realistically lead to divorce if spouses cannot come to an agreement. The unlikelihood of divorce if no agreement can be made is exacerbated by the stigma associated with divorce for women.

While women's landownership does not appear to directly influence their intra-household bargaining power when it comes to allocating household income, the absence of a direct linear link does not mean there is no link at all as landownership does increase women's decision-making when alienating the land and identifying who will inherit the land, which could in turn influence women's bargaining power in other bargains, such as income allocation.

Women require an increase in their intra-household bargaining position to take control over their own labour allocation and to gain control over land management decisions. Men's perception that women's increased education and paid labour increases their intra-household bargaining positions results in men controlling and restricting women's labour within and outside the household. This suggests that

bargaining outcomes in relation to resources reinforce power or powerlessness as power largely determines the outcome of a bargain over resource control and obtaining or losing control over resources such as land, labour, and income directly impacts bargaining power in future bargains. Bargaining in intra-household relationships thus first takes place over resource control and second over how those resources are allocated towards household food security. A woman's employment or landownership thus only marginally increases her intra-household bargaining position in resource allocation because of the rigid gendered division of labour. An increase in women's relative intra-household bargaining position is likely to benefit the household as a whole because women are expected to be near the home, which means women's opportunities and needs for spending and allocating money are considerably different from men and result in less individual spending and more for the household. Thus, gendered differences in income allocation are not necessarily the result of different preferences between men and women, but the result of different circumstances and situations.

Intra-household food allocation is equitable, with rare food shortages equally absorbed by adult household members. Every household member can increase or decrease the quantity of food intake based on preference and based on needs. Intra-household food allocation does not always equal actual food consumption since household members regularly eat outside the household for work or leisure, mostly adult men. The principal model in Katuyanur's households is thus a cooperative model, but certain decisions and resource allocations do not follow this model. The allocation of labour is not according to a cooperative bargaining model, but the pooling of income and allocation of income is like a cooperative model.

For many households, the pooled income is too narrow to bargain over income allocation. Bargaining requires choices, options over which to negotiate. Many households do not have choices as the household's income can only just cover basic minimum needs. There is no space for any household member's preferences outside the bare minimum. This does not mean household members have equal preferences; women are more likely to save money while men are more likely to spend money. While Kabeer (1997) found that women do not consider their own wellbeing as separate from the household, the women in Katuyanur clearly expressed that they need enough food to be able to work. They did not make any differences in this need between themselves and men. The only exception here was towards children; women did generally say that their own wellbeing was less important than that of children. This is also shown in women wanting to spend on personal looks when they are working outside the village compared to working within the village. The reason for women's apparent lack of interest in their personal wellbeing is clearly linked to gender roles in which women are rarely leaving the village. Women's responsibilities in or near the home result in women spending little money outside the home. Women's different situation compared to men results in women preferring to save money or spend money on the household rather than on individual expenses and on non-food expenses such as fuel,

motorbikes, and smartphones. But due to limited budget, neither can do what they prefer. An entitlement approach for command over food assumes food is a priority for households, but for the households in this study, command over food is not an entitlement they prioritise and bargain over. Only when the household's total income would increase, bargaining between household members can take place over allocating the extra income and here women's income contributions have greater influence on the relative intra-household bargaining positions compared to women's landownership.

Chapter 9 - Conclusion: Command over Food in Rural South India

In this dissertation I investigated the links between access to land and household food security in rural South India. Throughout four empirical chapters, I explored issues related to access to land and food security to answer two research questions: 1) what is the impact of gendered social practices on access to land in rural South India and why? 2) what is the role of access to land in household food security and why? This study's findings show that the gendered division of labour dominates access to land and household command over food. I applied three theories as a frame of reference for data analysis; the (extended) entitlement approach, the bargaining approach, and a bundle of rights metaphor. These three theories were useful in the analysis of the issues related to access to land and command over food, and the links between them. During data analysis, however, several theoretical shortcomings surfaced. I will discuss these in direct relation to my main findings in the two sections that follow. Section 9.1 answers the first research question and section 9.2 provides an answer to the second research question. The final section of this chapter will present a reflection on my PhD process, experience, and learning.

9.1 The impact of gendered social practices on access to land

Access to land refers to the ability to benefit from land and can be established through landownership but also through other arrangements of access to land that are legally or socially recognised and enforceable by an external authority, therefore including informal land access. The extended entitlement approach, developed by Leach, Mearns and Scoones (1999) based on Sen's (1981) entitlement approach, can be used to explain how endowments are obtained, in addition to how entitlements are obtained. The entitlement approach allows for flexibility in exchange entitlements to include any other factors that might be relevant, although many of these factors are social in character and therefore undermine the individualistic focus of the entitlement approach (Fine, 1997). For example, property rights can be individual, but inheritance practices (determining individual property rights) are social; earned wages can be individual, but the gendered division of labour (determining the earned wages) is social. Therefore, as exchange entitlements are embedded in social and cultural dimensions, this study focussed on social practices that impact access to land.

Although the literature discussed in section 2.3 identified various mechanisms through which social actors can gain access to land, this study has shown that bargaining over gaining access to land takes place between different social units, for example between households, or between household and the State, and bargaining outcomes are characterised by caste and gender. The most prevalent types of land villagers of Katuyanur had access to were *poramboke* land, forests, housing land, and arable land. For access to *poramboke* land, bargaining takes place between households and the government rather than between households, as households who currently live on *poramboke* land pay the government housing taxes to live

there, which prevents bargaining between households over access to these *poramboke* lands, at least until these households vacate the land and stop paying the housing taxes. For access to forests, bargaining takes place between communities and the government. Access to forests is an entitlement only for Malayali villagers, irrespective of gender, based on their membership to the Malayali community. Gaining access to land for housing or cultivation was the result of bargaining between and within households and took place through different mechanisms: renting/leasing, (early or unregistered) inheritance, land reform, and access through relatives. Although these access mechanisms are specific to the research location, they fit into the more general mechanisms identified by De Janvry *et al.* (2001); intra-family transfers, intra-community access, land markets, and land reform. Temporary access to land for cultivation through renting/leasing or through relatives were uncommon but equally accessible to men and women. Access to land that assumed permanency and a great likelihood to result in a transfer of ownership, i.e., early inheritance and unregistered inheritance, was unlikely to be gained by women.

Caste differences were less prominent among the various arrangements of access to arable land, as they were found to be prevalent among all castes. However, access to land through land reform was only available to landless Malayali households and access through (early or unregistered) inheritance was more likely among BC and MBC households. The latter was caused by caste-based differences in landownership in which landownership was found to be skewed towards BC and MBC households, as landlessness only existed within the Malayali community. This is not surprising as previous studies have shown that ST and SC communities are more likely to be landless or have insecure tenure rights (for example, Besley *et al.*, 2016; Moses, 2003; Thangaraj, 2003). In Katuyanur this inequality in landownership largely resulted from poverty and consequently forced land sales. The (extended) entitlement approach has an individualistic focus; a social actor's endowments offer options for exchange entitlements and all these theoretical options make up a social actor's entitlement set. However, exchange entitlements can often only be realised through bargaining with other social actors in which social relations and social factors are crucial. Consequently, bargaining outcomes are characterised by caste and gender. This means that a social actor's entitlements set is embedded in social relations and not all theoretical exchange opportunities are available to every social actor in practice.

Simultaneously, this study has shown that gender is crucial in ownership over arable land and housing land, although the latter only existed within the Malayali community. Transfer of landownership mostly takes place through inheritance. The Hindu Succession (Amendment) Act, 2005 provides sons and daughters from Hindu communities with equal rights to inherit landed property. Local practice, however, strongly favours sons to inherit the land while systematically violating women's rights to inheritance. A bargain about access to land through inheritance is not only between brothers and sisters because of the practice of early inheritance, which means parents arrange inheritance of land before their death. A bargain about inheritance of land is influenced by social beliefs that daughters should not inherit land. Although

Velayudhan (2009) wrote that inheritance practices differ among caste, religion, and community, among other factors, inheritance practice within Katuyanur was quite uniform. Households of every caste referred to five reasons why daughters should not inherit land: daughters receive marriage gifts instead of their inheritance share in land, patrilocal residence makes it difficult for daughters to manage the land after marriage, daughters become the responsibility of, and responsible for, her husband and parents-in-law, women prioritise a good relationship with their brothers over land, and landowners do not own enough land. These five reasons ensure that bargaining about land inheritance between brothers and sisters and parents and daughters is uncommon and support sons' inheritance of land.

Any initiative to bargain about land inheritance lies with women. However, the consequences of such a bargain, regardless of the outcome, make the bargain unappealing to women. These consequences include loss of social support from brothers and from the wider community, a consequence which Agarwal (1994) pointed out has important implications for a woman's fall-back position and consequently bargaining power. Men, on the other hand, do not risk loss of social support from the community or from sisters. Such a bargain in which women jeopardise something men do not, in this case social support, is what Kabeer (1997) referred to as a patriarchal bargain, using a term coined by Kandiyoti (1988). Indeed, in a bargain over land inheritance between brothers and sisters, social support increases brothers' bargaining power because they do not have to choose between social support and land, while women cannot have both and choose social support over inheriting land. The Hindu Succession (Amendment) Act, 2005 accomplished that women can file complaints if brothers violate their rights to inherit landed property, which women also use to claim financial compensation for waiving their rights. Brothers prefer to pay compensation to their sisters over parting with land, while sisters are more likely to accept money rather than insisting on a share of land. The question then arises whether men and women have different perceptions on land as fall-back position. The answer is no; men and women both consider land one of the most important endowments for rural livelihoods. However, the social consequences for women who claim financial compensation are considerably less compared to the social consequences for women who insist to inherit land. This is an excellent example of what Agarwal (1994) referred to as there being 'several levels of bargaining', in which the influence of fall-back position indicators on bargaining outcomes depends on the situation and what is bargained about. Bargaining power as an outcome of fall-back position depends on economic circumstances as well as social structures (Dube, 1997). Indeed, women's fall-back position is by default less advantageous compared to men, irrespective of caste, age, and personal characteristics, because of several social factors; women's unlikeliness to remarry, women's exclusion from the inheritance of landed property, and the practice of patrilocal marriage.

The benefits of access to land, or the rights derived from access to land, differ among social actors. A bundle of rights metaphor represents these rights derived from access and, as Meinzen-Dick *et al.* (1997) already argued, is valuable in emphasising the existence of property types beyond legal ownership.

Schlager and Ostrom (1992) discussed a bundle of rights derived from common property in reference to five independent rights: access, withdrawal, management, exclusion, and alienation rights. Except for access to *poramboke* land and access to forests, the majority of access to land in Katuyanur existed within the legal system of private landownership. However, this study has shown that in a bundle of rights derived from private land, these five rights identified by Schlager and Ostrom (1992) remain useful. Although in order not to confuse the *right* of access to land, i.e., the right to enter, with *access* to land, i.e., the ability to benefit from land, I have referred to this first right in the bundle of rights as the right of entry.

While access to *poramboke* land is not restricted to specific social units, in practice only Malayali households have access to *poramboke* land because households from other communities all have access to private land on which they can live. Malayali households with access to *poramboke* land hold a bundle of rights that includes entry, withdrawal, management, and exclusion. This bundle of rights is an entitlement based on paying taxes over the *poramboke* land. While these households no longer bargain on gaining access, they now bargain over their bundle of rights derived from the access. Specifically, these households bargain with the local government about obtaining ownership over these *poramboke* lands and expand their bundle of rights to include the right of alienation.

Access to forests is officially limited to local Malayali households, but in practice local villagers of any caste can enter and withdraw from the forest. However, Malayali women are the most regular forest users, as they frequently collect firewood. The Malayali community bargains with the government to expand their bundle of rights to withdraw more than only minor forest produce and to be able to exclude non-Malayali households from withdrawing from the forest. In bargaining over access to forests there are thus more than two social units involved, one of which, the government, acts as facilitator and is the only social unit that can make decisions. Furthermore, bargaining in such situations is non-cooperative as the resources are limited and each social unit attempts to maximise their allocation, even if that seriously harms the allocation for the other social units. Bargaining between households over access to land thus takes on a very different role compared to bargaining within households, as the independence of households means that there is not much of a breakdown risk.

Bundles of rights derived from access to private property are the result of bargaining between different social actors, usually from different households. Access to land to use as path, for animal husbandry, or for picking non-cultivated crops encompass a limited bundle of rights; the first only the right of entry and the other two contain additional withdrawal rights. The social actors with a bundle of rights that includes exclusion and alienation rights, usually the landowners and their household members, define the limitations of the entry and withdrawal rights of other social actors. This also means that they can revoke these entry and withdrawal rights at any time without reason. Social actors without exclusion and alienation rights thus rely on a continued good relationship with the landowning household to ensure continued access. Access to land for cultivation implies a greater bundle of rights; one that includes

management and alienation. The bundle of rights thus makes a useful contribution to the entitlement approach as it helps to unpack the rights social actors or communities can derive from an asset rather than assume assets are individually owned with only the owner benefitting from the asset, as was the case with Sen's original entitlement approach. Using a bundle of rights metaphor in a theoretical framework alongside the entitlement approach thus provided an in-depth understanding of the complex and fluid social relations regarding property.

Bargaining over access to land not only takes place between social actors from different households but can also occur between household members. Such intra-household bargaining over ownership, however, was uncommon in Katuyanur. Stable households consider land common property, although not each household member derived an equal bundle of rights from this land. Intra-household bargaining over access to land thus mostly related to each household member's specific bundle of rights derived from the household's land. In intra-household property relations, regardless of which household member owned the land, women's bundle of rights included entry, withdrawal, and exclusion of non-household members, while men's bundle of rights includes entry, withdrawal, management, and exclusion of non-household members. The right of alienation was only held by the household member in whose name the *patta* was issued. Women's bundle of rights in access to land thus excludes management, even if they own the land. Women have greater decision-making power over who will inherit land they own compared to land owned by other household members, but this is only one part of control over land. The other part, the right to manage land, is beyond women's reach, regardless of whether they own the land. Thus, while landownership is often associated with the greatest bundle of rights, one that includes the right to alienate land in addition to the other four rights, this clearly does not hold up for women's landownership over arable land. The small number of women in this study who did manage their household's land did not own the land but in their husbands' absence, the management rights were (temporarily) transferred to the women. Men thus have greater rights to manage arable land compared to women and increased landownership among women does not decrease men's right to manage the land. With increasing outmigration of men as a result of unsustainable agricultural livelihoods, increasing numbers of women are likely to gain management rights.

Bromley (1989) argued that common property is distinct from open access and individual property as common property has a well-defined social unit that can use and manage the property rather than a single social actor or an undefined group where no one has rights or duties regarding the property. Intra-household property relations thus directly challenge the often-assumed dichotomy between individual and common lands. A household's arable land may officially be registered as individually owned, but in practice all adult household members have some bundle of rights derived from this land. This suggests that a household's land contains aspects of common property and individual property, but in practice a household's land is neither individual nor common. These findings have crucial implications for theories on

links between women's landownership and their intra-household bargaining power. Arable land for which an individual *patta* is issued by the government, is locally considered as household or joint family land, not individual land, a finding in line with previous studies, such as by Rao, Pradhan and Roy (2017). Providing women with *pattas* to empower them, expecting this to be their individual property, does not necessarily increase women's bargaining position within intra-household relationships because spouses do not consider land individually owned. Registering land in women's names therefore does not guarantee women's control over that land, as the right of management depends on gender, not on ownership. Furthermore, intra-household bargaining over land rarely takes place because an intra-household transfer has little impact on the intra-household allocation of resources due to the generally cooperative nature of household management. This is not to suggest that landownership never empowers women, but it depends on a woman's situation. Landownership becomes crucial for women in circumstances of relationship breakdown, for example due to widowhood or separation, because landownership increases her economic position. Precisely because of the importance of landownership for women in such circumstances, women do not bring their relationships to the point of breakdown by bargaining over an intra-household transfer of landownership.

9.2 The role of access to land in household food security

Household food security depends on four pillars: availability, accessibility, utility, and stability. Food accessibility poses the main problem for households in Katuyanur and closely relates to problems in food stability. Behavioural strategies to cope with insufficient command over food were compromising on food quality, compromising on food variety, and getting loans or borrowing money to buy food. Hunger and starvation are not prevalent in the research area because of the food rations provided through PDS. Households lack dietary diversity and nutrition; two to three meals a day comprise rice while only very few households eat vegetables every day. Small and big farmers' requirements for quality and diversity of food are higher compared to landless households and marginal farmers. Among all households in this study, food preferences, dietary diversity, and access to healthy food were luxuries the household members could not give too much thought. The allocation of food among household members was equal in type of food and based on need and preference in quantity of food. However, women were less consistent in consuming three meals a day, which they attributed to the day's workload rather than insufficient command over food. No evidence was found to indicate that particular household members consistently eat less food or less diverse because of unequal intra-household food allocation. However, since this study focused on informants' perceptions of intra-household allocation of food, this finding does not imply the allocation of food was equal, nor that all household members had an equal nutritional status. The fact that men eat outside the home more frequently than women may result in differences in nutritional diversity between spouses or brothers and sisters.

In the entitlement approach, command over food depends on the endowments a household can utilise to obtain command over food through exchange. For agricultural households, production-based entitlements and own-labour entitlements (Sen 1981) are particularly relevant in this exchange. In this study I investigated how households utilise these two entitlement relations towards obtaining command over food. In theory, the more entitlement relations a household can draw upon, the greater the possibilities of obtaining command over food. Or, in other words, the greater a household's entitlement set (Osmani, 1993; Ribot, 2014). In Katuayanur, households without access to arable land only had their labour to sell, while households with access to arable land could obtain command over food through production-based entitlements as well as own-labour entitlements. Households with access to land would thus have a greater exchange entitlement set compared to landless households. Indeed, this study showed that severe food insecurity was more prevalent among households without access to arable land compared to households with access to arable land. However, this study also revealed that not all households with access to land were food secure, nor were all households without access to land food insecure. In fact, this study showed that households with non-agricultural incomes were not more vulnerable to food insecurity compared to farming households, while agricultural wage labourers were most vulnerable for household food insecurity. Therefore, I argued that a combination of additional factors and endowments as well as highly gendered social variables are crucial in households' ability to derive command over food from access to land and own-labour, as well as the bundle of rights that is derived from their access to land. These additional factors and endowments include land size, access to irrigation facilities, access to credit, and access to labour opportunities. The number of comprehensive studies focussing on the various links between land and food are only few (Holden and Ghebru, 2016; Maxwell and Wiebe, 1999; Muraoka, Jin and Jayne, 2018), and thus this study contributed to better understand these links.

The most common production-based entitlements in the studied village were derived from arable land, animal husbandry, and pastoralism. Arable land was valued in all households, as those with access to arable land would do anything to preserve their access, while households without access to arable land hoped that they could buy arable land one day. Households without access to arable land believed that owning land would stabilise and secure their command over food because land offers an opportunity to cultivate food for their own consumption. Households with access to arable land perceived the benefits from cultivation in various ways, depending on whether they considered farming their main livelihood or an opportunity to complement other sources of income. Access to arable land can therefore mean greater economic opportunities through a greater variety of endowments, but it can also be a necessary means to survive if without access to land the household would face entitlement failure in terms of command over food.

The relation between access to arable land and command over food is not straightforward; not every household with access to arable land has equal command over food through production. Scholars

such as Meinen-Dick *et al.* (1997) emphasised that effective use of land depends on the fulfilment of the needs related to landownership, such as access to cash and credit, participation in (irrigation) committees, and/or (political) connections. At the same time, the ability to fulfil such needs is highly gendered, as Momsen (2019) emphasised for access to agricultural inputs. Likewise, this study identified several important factors related to effective use of land that directly influence household food security. Firstly, the size of arable land plays an important role in how much command over food a household can obtain as the greater the size of land a household has access to, the greater the likelihood of household food security. Thus, big farmers are more likely to be food secure compared to marginal farmers, the latter constituting the majority of farmers in the research location and whom are disproportionately MBC and ST farmers. Secondly, the availability of working irrigation facilities is the main factor influencing a farmer's decision on what crops to cultivate, which directly influences the farmer's expected earnings and directly and indirectly influences their command over food. While the majority of farmers from each community did have some form of irrigation (working or not), lands owned by women were most likely not to have any irrigation facilities, and farmers with the best irrigation facilities (i.e., the deepest bore-well) were most likely to be big farmers. Thirdly, access to credit is crucial for farmers' ability to make effective use of arable land as few farmers had sufficient private funds to invest in cultivation. Access to credit offers opportunities within farmers' production-based entitlement set, but simultaneously poses a risk as farmers who default on a loan may be forced to sell (part of) their land, thus reducing their entitlement set. Eligibility for loans depended on a combination of factors, including caste, land size, and the bundle of rights derived from the land. While farmers who do not own arable land do have options for accessing credit, these options are often more expensive and lower in credit amount. While cheaper loans are available to ST farmers through the government, women of all castes are least likely to access sufficient credit to invest in cultivation as they are most likely not to own land and only have access to micro-credit offered by private financial institutions against high interest rates or small but cheap loans through their ROCSAs.

One factor that appears to be missing from this list is tenure security. Scholars such as Santos *et al.* (2014) and Muraoka, Jin and Jayne (2018) argued that ownership and tenure security make a larger contribution to land productivity and food security compared to lands without ownership or tenure security. While this study indeed found that food security was less likely among households who did not own the land they cultivated compared to households who did own the land, this result was more likely linked to the size of the land rather than the bundle of rights derived from the land, as all the food insecure households who did not own their land were marginal farmers. Although certain needs and opportunities related to cultivation do relate to ownership and tenure security, mainly access to credit and willingness to make long-term agricultural investments, this study did not find any evidence to support that landownership is more likely to result in household food security compared to access to arable land without ownership.

Access to land not only contributes to household command over food through cultivation but also enables animal husbandry and pastoralism. Animal husbandry and pastoralism were found to contribute to households' command over food in two important ways. First, livestock contributes to household consumption of animal products (milk, curd, meat, and eggs). Second, livestock contributes to command over food as a source of income. Not every household can raise livestock as this requires shelter and land for grazing or fodder. Households who only have access to housing land cannot easily provide either. Households without access to arable land who do keep a small number of animals therefore rely on informal arrangements of access to land, particularly for grazing on fallow land and for collecting weeds as fodder. Households with access to arable land are more likely to have livestock and can also keep a larger number of animals as they can rotate the grazing area between seasonally fallow parts of their land, grow fodder, or use the field residues for feeding. Unsurprisingly, the greater the size of arable land, the greater the number of animals that farmers can keep. Not only access to arable land is a determinant in ability to raise livestock, so is access to forest. Reduced access to forests has resulted in near disappearance of pastoralism in the area. This shows the impact of a change in the bundle of rights on a household's entitlement set and in turn on a household's command over food. While Dreze and Sen (1989) and Osmani (1993) argued that a household's entitlement set can only change when there is a shift in their endowments or in E-mapping, this study has clearly shown that such endowments are not restricted to owned assets, but also include access to assets without ownership and a change in the arrangement of the access, i.e. a change in the bundle of rights, can also cause a shift in a household's entitlement set. Sen (1981) had restricted the definition of endowments as what is owned. Other scholars such as Devereux (2001) had already critiqued this definition, pointing out that this does not include *usufruct* rights, for example. The current study has again shown that endowments are not always owned assets, as I had approached endowments from a broader perspective by incorporating some aspects of Ribot and Peluso's (2003) theory of access, in which access refers to the ability to benefit from things, and defined endowments as the assets, rights, resources, and labour social actors can access, i.e. benefit from.

Besides production-based entitlements, own-labour entitlements constitute important exchange entitlement relations to obtain command over food, particularly for households who do not have any access to arable land as well as for households whose production-based entitlements alone would lead to entitlement failure, the latter constituting almost all marginal and small farmers. The most common own-labour entitlements in the research location were wage labour, hunting, and gathering. While gathered edible forest products such as vegetables, tubers, fruits, tamarind, herbs, and honey are important sources of food for households in Katuyanur, the availability of these wild foods is limited and seasonal and requires a lot of time and effort to gather. By combining several labour entitlements, households expand their entitlement set. Women's labour opportunities differ substantially from men's labour opportunities, with women being overrepresented within the agricultural sector and underrepresented in all other sectors.

This difference in opportunities is not only the result of an increase of labour opportunities for men that remained absent for women, as Heyer (2014) argued, but also because there is a greater demand for women as agricultural wage labourers compared to men. While agricultural wage labour continues to be an important source of income for households without access to arable land, not every household without access to arable land is involved in agricultural wage labour, nor is each agricultural wage labourer landless. However, households without access to arable land were found more likely to be highly dependent on agricultural wage labour for their livelihood.

This is an important finding for household food security as, in line with the findings of scholars like Santos *et al.* (2014), this study showed that the households most vulnerable to household food security primarily relied on agricultural wage labour for their income. Agricultural wage labour is an insecure labour-based entitlement relation for three reasons. First, the *availability of agricultural wage labour* is inadequate due to the generally small farm sizes, changed cropping patterns from labour intensive crops to crops that require little labour, automation of ploughing, and the increased offer of specific tasks on contract basis. Second, the *gendered division of agricultural labour and gender wage gap* result in farmers preferring to hire women's cheaper labour rather than men's more expensive labour, which impacts the household's total income. Third, the lack of *accessibility to non-agricultural employment* due to lack of non-agricultural skills, illiteracy, and, for women, restrictions in mobility and conflicting responsibilities, result in villagers accepting the unreliable and low-paying wage labour. Inability to move into non-agricultural employment results in a weak bargaining position for agricultural wage labourers since demanding better wages means risking their income altogether, which would have devastating effects on their entitlement set. Thus, while agricultural wage labour is the least favourable own-labour entitlement relation, it is an important entitlement relation for households without access to arable land and often the only labour exchange entitlement available to women. The interdependence between farmers and agricultural wage labours, resembling non-cooperative bargaining, means that if the endowments or E-mapping for one of them changes, this has a strong impact on the entitlement set of the other. Therefore, farmers are crucial for society not only as food producers but also as employers: providing job opportunities for women. If farmers can cultivate year-round with high productivity, agricultural wage labourers can have year-round work.

Despite the evidence presented in this study that a greater bundle of rights, greater size of land, and the presence of working irrigation facilities all result in decreased vulnerability to household food security, this study also found that households without access to arable land, especially those households with non-agricultural incomes, were in a better position compared to marginal farmers. Clearly, access to arable land is not always a better endowment for command over food than labour-based entitlements. This important finding problematises the argument by Doss, Summerfield and Tsikata (2014), that marginal lands are often an important source for livelihood activities, as well as the statement by Pallas (2011) and S. Rao (2017) that access to arable land is one of the most important endowments for rural households,

since the findings of the current study suggest that the livelihoods of marginal farmers are less sustainable compared to landless households. Small and marginal farmers need to balance their engagement in wage labour with their workload at the farm, as farming alone would result in entitlement failure and thus severe food insecurity. The pressure on marginal farmers' time to combine various income generating activities to generate a sustainable livelihood makes their situation harder compared to landless households who have greater freedom to engage in better paid non-agricultural work.

This important finding shows that entitlement relations do not exist in isolation from each other and thus a greater entitlement set, i.e., the total of theoretical possibilities for exchange, does not always result in a greater command over food. As the total labour time available in a household does not increase if more entitlement relations are available, increased entitlement relations can potentially result in increased interference among the entitlement relations. The entitlement approach assumes a direct relationship between endowments and entitlements. However, such a relationship resembles more to a constantly transforming web of strings; connecting a multiplicity of endowments with a multiplicity of entitlements in which social units continuously draw, change, and remove strings. One endowment might serve multiple entitlements and one entitlement might be served by multiple endowments. Not every string in the web can be realised at the same time; the strings social units draw reflect their decisions on which endowments to utilise for which entitlements, at different moments in time and under different circumstances. Each entitlement relation thus depends on several other entitlement relations that can strengthen or hamper an exchange. The relative bargaining power of the separate social actors within a social unit indicates the likeliness that a preferred string is drawn, changed, or removed. The entitlement approach is a theoretical explanation why not everyone has equal command over entitlements, but the approach portrays a simplified version of social life; it does not give sufficient recognition to people's diverse and dynamic interactions, motivations, and choices, often based on relations of power. The entitlement approach alone can therefore not explain how social units utilise endowments to gain entitlements, nor can it predict social units' decisions on which endowments to utilise to fulfil which entitlements.

Relations between endowments and entitlements thus depend on decision-making; a process situated in social, cultural, and political relations. The bargaining approach can be used to investigate how social units draw strings between endowments and entitlements, in which decision-making power is a proxy for bargaining power. Social units' relative bargaining power changes according to the situation and what is bargained about; a bargain over food is not the same as a bargain over land, and a bargain within the household is not the same as a bargain between households. The bargaining approach is less useful to analyse intra-household bargaining over land and food in poor households. Households who live a hand-to-mouth existence have an income budget that does not offer much choice for income allocation. In such situations of constrained or optionless choices (Kabeer, 1997), there is not much to bargain about and

consequently the bargaining approach is unhelpful. Similarly, intra-household bargaining over access to land is not relevant to poor households because they prioritise their struggle for a sustainable livelihood; an intra-household shift in landownership contributes nothing towards a more sustainable livelihood. Intra-household income allocation towards food is a decision determined by the money in their hand at that moment rather than the result of bargaining between household members over budget allocation. This does not imply household members have identical preferences on how to allocate money, for example women are less interested in spending money and more inclined to save money compared to men, but household budgets are only able to cover minimum needs; bargaining over preferences requires flexibility in budget, which poor households do not have.

While farming is a weak exchange entitlement in terms of command over food for marginal farmers, marginal farmers are unlikely to move away from agriculture into better paying sectors. A farmer who cannot make a sustainable livelihood from their land could be better off selling the land and investing the earnings into land elsewhere or in a business. While Devereux (2001) emphasised that “endowments are not always exchanged for food because consuming productive assets undermines future viability” (2001, p.249), the entitlement approach considers a household’s goal to maximise their exchange entitlement towards household food security, in which land is just an instrument. However, people rarely consider their land a sellable asset. Instead, the value of land is not confined to its market value; it contains a social value that strongly influences exchange decisions. Land is intertwined with memories and generations of the past and of the future; land represents familial continuity. Katuyanur’s farmers are small-scale farmers for whom farming is a livelihood for meeting minimum needs, not about increasing and maximising capital. Links between land as endowment and food as entitlement are thus complex and ignoring the social value of land, risks oversimplifying these links.

This study has emphasised the complexity of the links between land and food and attempted to increase understanding of these links, as conventional one-directional links between land tenure and food security did not capture the complexity and dynamics that exist between land and food, as Maxwell and Wiebe (1999) had rightly argued. Interplays between various entitlement relations, in combination with highly gendered social variables can reinforce or hamper exchange entitlements derived from specific endowments. Sen (1987) indeed had argued that identical endowments can result in unequal entitlements as different people have different economic opportunities. This is not only the case for land as endowment, but own-labour can similarly result in unequal entitlements, especially when considering gender. While labour-based entitlement relations should be equal among men and women for equal work, the gender wage gap results in a narrower entitlement set for women agricultural wage labourers and reduced command over food as a result. Non-agricultural employment has a greater potential for command over food than agricultural wage labour, but non-agricultural employment is inaccessible for women. ST women specifically have a substantially less equipped entitlement set for command over food compared to any

other group of women and compared to men. Other groups of women do not necessarily have greater labour options compared to ST women, but they have access to arable land for cultivation and raising livestock. However, when they lose access to this land, for example because of divorce or denied access in widowhood, agricultural wage labour is also the only livelihood option for MBC and BC women. Women of every caste lack independent landownership, as Moser (1993) also argued, and lack non-agricultural employment opportunities. Women's capability for command over food thus depends on agricultural wage labour, a weak exchange entitlement, and on a production-based entitlement that entirely depends on their relationship with men. Therefore, women would benefit most from independent access to land in terms of command over food, while non-agricultural employment provides greater potential for command over food for men. However, increasing women's independent access to land should go hand in hand with recognising women in farming households as farmers in their own right, despite rarely owning arable land, increasing women's access to agricultural implements and credit, as women landowners are twice as likely not to have working irrigation facilities compared to men and are less likely to have access to agricultural loans.

This study showed that households' limiting factor for obtaining sufficient command over food is income. Lowering food prices may thus appear beneficial, but for rural populations this might result in greater food insecurity, especially if that means cultivators cannot afford to hire agricultural wage labourers, who then in turn do not have any income to buy food, despite the decreased food prices. Households with non-agricultural livelihoods are less vulnerable to food insecurity compared to households with a main livelihood from agricultural wage labour and compared to marginal farmers. However, this finding has important implications for women for whom non-agricultural employment is not accessible. The income gap between spouses is likely to widen due to men's better paid employment opportunities compared to women, a development with great implications for intra-household relations and decision-making.

This study has shown that decision-making and control over resources within households is dominated by men, although women can bring in ideas and opinions. However, while men dominated intra-household decision-making and control over resources, this does not mean that men took on a dictatorial role within the household. In fact, intra-household relations took the form of cooperative conflict, or bargaining, which scholars have described as representing the distribution of power within a social relationship (Agarwal, 1994; Kandiyoti, 2005; Katz, 1997; Mangubhai, 2014; Sen, 1985, 1987). Intra-household power relations can be measured using decision-making as proxy, in which acts of decision-making, as well as the absence thereof, are indicators of relative power (Sariyev, Loos and Zeller, 2020). Although there are many factors that can influence bargaining power, this study focussed on ownership and control over land and access to paid labour and found that women's intra-household decision-making, and consequently bargaining power, depends less on their ownership and

control over land compared to their participation in paid labour, while the contribution of paid labour to women's bargaining power is simultaneously limited by gendered social norms.

In general, households pooled the income earned by individual household members, as typical for a cooperative household, in which one household member usually kept the household's money, giving the other household members small amounts to spend in the form of pocket money. The allocation of pocket money was the result of (perceived) differences in needs, responsibilities, and labour, guided by the gendered division of labour. Households' food expenses took up a considerable portion of the total income and household members needed to decide which part of their total income to spend on food. Households try to expand their entitlement set by expanding their endowments and looking for more favourable entitlement-relations, but this is rarely motivated by a desire to increase their food consumption or their food consumption choices. Households prefer to have more money to spend on food, but there was no indication that a household member prefers a greater proportion of the total household income to be spend on food at the cost of another expense. Similar to the time constrains within E-mapping, decisions on allocation of income means that when certain exchange entitlements are chosen, this excludes simultaneous reliance on other exchange entitlements that also require a share of the income. This is highly relevant for choices on income allocation for food as these depend on income allocation choices for non-food and on labour or production investment choices.

Decisions on the allocation of pooled income are made among spouses and parents(-in-law) through cooperative bargaining. When expenses came up, household members discussed how to manage paying this. Several studies indicated that women's control over income is crucial for household food security as women spend a greater part of their income on household expenditures (Allendorf, 2007; Meinzen-Dick *et al.*, 1997; Quisumbing *et al.*, 1995; Rao, 2006; Rao, Pradhan and Roy, 2017; Sraboni *et al.*, 2014; Wiggins and Keats, 2013). However, irregular and restricted incomes, for wage labourers and cultivators alike, resulted in little calculation of what proportion of income should be spend on food. Instead, households' food purchases were based on the amount of money left after making all necessary non-food expenses. Such restrictions on choices is what Kabeer (1997) refers to as 'constrained choices', while the little choice to consider when income is used for minimum needs for survival is an 'optionless' choice (Kabeer (1997)). Most households in this study continuously lived in such situations of constrained choices or optionless choices, which simultaneously meant that bargaining between household members did not take place as there were no options to bargain about.

Intra-household decision-making and control over resources differed between households. This is not surprising since several scholars, including Andersen (2005), Mohanty (1984), and Momsen (2019), had already argued that gendered power relations are crosscut by race, age, caste, ethnicity, class, religion, culture, and disability. This has resulted in studies on the Indian household reporting

various models for resource allocations (For example, Balasubramanian, 2013; Clark-Decès, 2014; Heath and Tan, 2020; Munro *et al.*, 2014). However, intra-household decision-making and control over resources did not only differ between households, but could also change within households, depending on the situation. The complexity and situatedness of intra-household power relations and the strong influence of social norms were illustrated by four important findings.

Firstly, labour allocation plays an important role in household command over food as labour investments, either in agricultural production or in employment, largely determine the household's total income. However, control over the allocation of household members' labour is a complex issue. While women engaged in paid labour choose to do so themselves, suggesting they controlled their own labour allocation, these women's labour engagement choices were simultaneously restricted by men's control over when and where women could work. The greatest limitation to women's labour allocation options was the gendered division of labour in which women are solely responsible for the work inside the house. Women could only control their own labour within set boundaries that ensured that the general division of labour remained unaffected. The household's economic status played an important role as women from poorer households were more likely to have paid employment. This finding therefore might support Heyer's (2014) argument that withdrawal of women from agricultural wage labour is not necessarily the result of increased patriarchal restrictions, but due to economic betterment. However, the women who withdrew from paid employment did not choose to do so themselves, but their husbands made that choice for them. Thus, the withdrawal of these women from agricultural wage labour was directly related to patriarchal restrictions and social norms.

In a cooperative household, where the allocation of resources is efficient, any shift in income or labour allocation related to one household member would impact the income and labour allocation for the other household members. However, the evidence from this study shows that unpaid household labour allocation is preventing women from taking up paid labour and women who do have independent earnings still have little power in bargaining over their own labour allocation and over the labour allocation of spouses. This suggests that intra-household labour pooling is inefficient, signifying a household management structure of non-cooperative bargaining, since a change in women's labour allocation towards paid labour would increase the household's total resources without increasing men's labour allocation (unless men take up more household labour). Thus, when it comes to labour allocation, households actually follow non-cooperative bargaining, which can include pooling, but the allocation of resources is not efficient, i.e. there are alternative outcomes that would benefit every social actor better.

Secondly, while women's decision-making power was expected to increase as women gained landownership, the distribution of management rights was found to be more important in intra-

household bargaining over income allocation compared to alienation rights. Land is suggested to be one of the most important assets for women that directly benefits household food security because landownership increases women's bargaining power (Agarwal, 1994; Das *et al.*, 2013; Doss, Summerfield and Tsikata, 2014; Thomas, 1990) and women's increased bargaining power would result in more of the household's income being allocated towards food and other household needs (Allendorf, 2007; Meinzen-Dick *et al.*, 1997; Quisumbing *et al.*, 1995; Rao, 2006; Rao, Pradhan and Roy, 2017; Sraboni *et al.*, 2014; Wiggins and Keats, 2013).

However, as concluded in section 9.1, landownership does not necessarily increase women's bargaining position within intra-household relationships due to the cooperative nature of household management. Consequently, women who came to own land did not experience any change in intra-household bargaining or decision-making power over income allocation. However, an important finding was that household members hold different bundles of rights over their household's land and intra-household bargaining power about income allocation mostly related to management rights. While women with landownership had greater decision-making power in terms of sale or inheritance decisions, management rights were more directly related to household food security as management rights played an important role in food availability through production and income generation. Women could hold management rights without holding alienation rights, particularly women who were the main farmers with husbands working fulltime in a non-agricultural sector. These women were most likely to be marginal farmers. In households where men and women both contributed their labour to the farming, usually the larger farms, women did not have management rights. Clearly, control over farm management is unrelated to landownership or alienation rights. Consequently, women's increased landownership did not result in women's increased intra-household bargaining power. This shows the importance of recognising the 'fuzziness' of property relations not only between households, but also within the household, as the 'fuzziness' of property relations problematises the common argument that landownership empowers women, as women may own land, but not actually manage and control the land.

The existing 'fuzziness' of intra-household property relations is an important finding as Sen (1985) argued that resource distribution within sets of relationships represent relative power and that this principle is the basis of bargaining or cooperative conflict. However, the evidence presented here shows that an intra-household transfer of land *patta* from a man to a woman did not result in an increase in the woman's bargaining power in cultivation decisions; her right to manage the land remained equal to before she owned the land. Likewise, men who lost the *patta* to a woman within the household do not lose bargaining power in land management. Thus, the importance of resource distribution in intra-household bargaining, or cooperative conflict, may be considerably less than Sen

(1985) and Agarwal (1994) had argued and women's access to land, not necessarily ownership, only contributes to their bargaining power if accompanied by the right to manage the land.

Thirdly, household members made different contributions to the household's total income and labour and men and women both justified men's greater role in decision-making based on men's greater financial contribution to the household income. Indeed, several scholars have shown that employment or other income earning means play an important role in fall-back position and bargaining power (Agarwal, 1994; Deutsch, 2007; McElroy, 1997; Rao, 2014). While the findings in the current study do not contradict this role, it is important to recognise that intra-household bargaining power is not proportional to income or labour contributions. Instead, intra-household bargaining power over income allocation relates to the *perceived* contribution of each household member. Recognising a difference between actual and perceived contribution is crucial because women's financial contributions to the household are largely invisible; women farmers do not get paid for their labour, women farmers do not sell the farm's produce, women wage labourers receive less than half the wages of men, and women perform all the non-paid labour in the home. The gender wage gap poses an immense challenge for women's contributions to the household income to become perceived as substantial, even if women work more days in a month than men, while for farming women their invisibility as a farmer makes their contribution entirely unacknowledged. This does not mean that a change in income contribution has no influence on bargaining power. For the households in Katuyanur there were roughly two types of earned income: common earnings through cultivation and independent earnings through employment. Women's independent earnings, like men's independent earnings, were added to the pooled income to pay for household necessities such as food and paying off loans. Women of farming households, especially BC and MBC women, were less likely to have independent income through wage labour compared to women in households without access to land. Women without independent income experienced less participation in income allocation decisions compared to women who engaged in paid labour, and the latter mainly comprised Malayali women. Thus, while independent income had a significant effect on women's bargaining power in income allocation, such an effect was absent when it came to common income. Women's economic independence could thus significantly benefit household food security because it would result in an increase in total household income and therefore increased visibility of women's contributions. Women who headed the household had greater decision-making power in income allocation towards food. However, women who controlled household finances due to absence of husbands, either temporary or permanently, only had this control within the income limits provided and controlled by husbands rather than over husbands' entire earnings. Thus, the composition of the household, specifically the presence or absence of husbands, plays an important role in women's control over income allocation towards food.

Lastly, depending on the exact decision that needed to take place, relative bargaining power among household members shifted. For example, while both spouses had some say in *what* food is bought, men had greater decision-making power in *when* specific food items are bought, but simultaneously women did not want to change the power positions in the latter by taking control over grocery shopping. McElroy (1997) made a distinction between long-term and short-term decisions and argued that women's decision-making power as a result of an increased fall-back position is only visible in long-term decisions, such as allocation of labour, fertility, health, and children's human capital. Although in the current study there was not such a clear distinction between the types of decisions that were influenced by women's increased fall-back position and the type of decisions that were not, the findings do support the suggestion that an improvement in fall-back position does not result in greater bargaining power in every bargain and in every decision that can be made. Bargaining power is thus situational and even when keeping fall-back positions unchanged, relative bargaining positions within the household can differ from one decision to the next. The relationship between fall-back position and bargaining power is thus more complex than a linear reinforcing relationship.

The evidence for this complexity and situatedness of intra-household relations supports Katz (1997) argument that a unitary model, cooperative model, and non-cooperative model can coexist within a single household, depending on the type of resource that is allocated. The principal model in Katuayanur's households is thus a cooperative bargaining model, but certain decisions and resource allocations do not follow this model. The allocation of labour is not according to cooperative bargaining, but rather non-cooperative bargaining, while the allocation of income does take place according to a cooperative bargaining model. Furthermore, an entitlement approach for command over food assumes food is a priority for households, but for the households in this study, command over food is not an entitlement they prioritise and bargain over. Therefore, as E-mapping for income allocation towards food is currently largely based on constrained or even optionless choices, freeing up choices requires an increase in income, either through an increased economic return on current labour, increased efficiency in labour allocation, or through an increase in paid labour. Only when the household's total income would increase, bargaining between household members can take place over allocating the extra income and here women's independent income contributions have greater influence on the relative intra-household bargaining positions compared to women's landownership.

The entitlement approach and the bargaining approach both explicitly focus on social inequality and power differences. Equality in endowments would lead to equality in bargaining position and result in equal command over entitlements. Sen and Agarwal may not reject a view that ideologies can determine material conditions, but emphasise that material conditions determine power, or command over commodities and bargaining power, respectively. However, this study has shown that while access to land

influences social structures of inequality, access to land is simultaneously influenced *by* social structures of inequality. This means that even with identical endowments, entitlements can still be unequal as a result of social structures of inequality. Equal endowments do not always result in an equal entitlement set. The invisibility of women's labour and income contributions, women's lack of control over their own labour, and women's lack of control over land result in a smaller entitlement set compared to men, even with identical endowments in property and labour. Clearly, social structures determine the value of social actors' endowments. As a result, increasing women's endowments in labour and assets would not automatically lead to women's greater bargaining power if the social structures that limit or facilitate women's and men's exchange entitlements are not addressed. Women's lack of landownership results from lack of bargaining power, but landownership does not always increase bargaining power; it is not a bidirectional relationship. Women's position within the household is therefore not a reflection of women's property, but women's (lack of) property is a reflection, a symptom, of women's position within society. Treating a symptom does not cure the problem. Likewise, providing women with property does not increase women's position in society, nor in the household.

Since the number of landowning women in this study was very low, further research is required to investigate if women who gain land through bargaining do experience a change in intra-household bargaining power. Also, none of the households in this study in which women owned arable land had been landless before the women gained the land. The influence of women gaining arable land in landless households on intra-household bargaining power might differ from the influence of women gaining land in landowning households. This also requires further study, although this study did not find a difference between these two situations for housing land. The gendered division of labour, in which women rarely have management rights over land, results in women's labour contributions becoming disconnected from the income made from the land. The relationship between women's landownership and household food security thus remains ambiguous. Gender equality in landownership is an important goal in itself, but it does not relieve the day-to-day struggle of agricultural households, nor does it noticeably increase women's intra-household bargaining power.

9.3 Reflection

A lot happens in four-and-a-half years; the time it took me to complete this doctoral dissertation. During this time, I have grown, both as a person and as a researcher. Some of this growth has been a direct and conscious result of being a PhD student while other growth has been a more unconscious side-effect. The first year-and-a-half, when I dedicated my time to reviewing relevant literature and refining my research aim and questions, I improved my critical thinking as there were many studies that linked to my topic one way or another, as were the choices for theories to incorporate in my study. As the focus of my study consisted of multiple layers (communities, inter-household, and intra-household) as well as making links between two areas (land and food) that had been studied extensively but mostly independently from each other I could not cover all that I was interested in with one or two theories to form my theoretical framework. In the end I finalised my theoretical framework by interweaving three theories, which I knew would pose a challenge, but leaving any one of them out would result in a gap in my framework and consequently I would not be able to achieve my research aim.

As expected, reading and writing increased my knowledge on the topic enormously. However, in hindsight the literature review mostly prepared me for expected findings; I had not paid sufficient attention to how previous research was conducted with the consequence that I had not adequately used these studies to prepare a practical plan of research activities. Therefore, next time I should more carefully plan certain activities in advance, for example activities for which I need other people or translators, interview both men and women for perspectives on intra-household relations, and use help in obtaining maps and other documents. For future research activities I thus need to be careful not only to plan what questions I am interested in, but also how and when I will do certain research activities to get answers to these questions and which informants I will try to engage in which activities.

My PhD research was not my first experience with doing ethnography, but nevertheless it increased my research skills and my confidence. I knew beforehand, based on my previous experiences, that I had to remind myself regularly why I was in the village, i.e., to do research, to prevent myself from getting too settled and comfortable in the village, resulting in me just living in the village rather than doing research. Nevertheless, as I described in section 4.6, I found it increasingly difficult to distinguish life in the village with research in the village as work relationships with informants grew into friendly relationships. Working with a translator did help with that, as the only reason she was in the village was to help me and thus simply seeing her reminded me that I needed to get work done. I grew more confident and bolder in approaching people I never met before to ask for an interview. I noticed a clear difference between my first couple of days and by the end of my fieldwork as it became increasingly easy for me to knock on peoples' doors. It definitely helped that everyone I asked for an interview was extremely accommodating and hospitable.

I continue to be amazed by how welcoming people in India are. Inviting me in their homes for meals or allowing me to live with them for several months at a time. I quickly felt accepted and even now, more than two years since I left the field, I remain in regular contact with my host family. In relation to my fieldwork, 99% was nothing but rewarding experiences. However, the remaining 1% were confrontational experiences of unwanted feelings of dependency and sometimes even irritation and neediness. On occasion I felt I was losing myself as I value my independence at home and I can do whatever I want whenever I want, but living with a host family in India meant I needed to adjust myself and accept that my host family took on a caring role of responsibility over me, which meant that I had to listen to their advice and sometimes leave things they advised against, for example the night-time temple visit as I described in section 4.6. Besides losing my sense of independence, I also noticed that at times I acted irritated or sometimes needy when someone did not have time for me. I do not know where this came from, as I had not experienced that before, but it might have had something to do with my dependency on many people there which I did not consider as positive.

The most difficult aspect of the entire process was to identify the most useful theories in the field and make explicit connections between my own research findings and those existing theories. I tried to be critical and evolve the theories to offer alternative versions for those areas of the theories I had identified as problematic based on my own findings. In doing so I had developed a bundle of capabilities, but my argument why this theory was more useful was not convincing enough, so I scrapped this from my work. I struggled finding ways to connect my research to existing theories, especially when I felt the theories did not explain sufficiently what I found and therefore some findings just did not 'fit', making it hard to make sense of my findings enough to come out with some generalisations. I changed my mind so many times about the usefulness of the theories I had identified but, in the end, I accepted that no theory will eventually fit any research findings perfectly.

I can honestly say that I have enjoyed every minute of working towards my doctorate up until and including the day of my Viva. Although receiving corrections was not unexpected, the mental struggle that came after was unexpected as I had not experienced that at all before working on my corrections. I had lost my motivation and struggled to get it back. The pandemic definitely played a large role in lack of motivation as I could no longer work on my PhD in the library, where I could work well. Also, I experienced little pressure to complete the revisions quickly, as there did not appear to be many employment opportunities in academia or research in my area of interest. The timeline I had given myself for completing the revisions thus had to change accordingly. I tried various methods to regain my motivation, for example rewarding myself with some time off to do something completely different after completing another chapter or spending days in cafes, which did help me regaining some energy and motivation. At the same time, my experience over the last year has not changed my view on the PhD process overall, which I enjoyed very much, nor has it changed my aspiration to continue with a career in academia and research. I look

back on the past years with happiness and immense gratitude; for being able to spend so much time on a research project I was passionate about and for meeting many great people who supported me in my endeavour.

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Appendix I - Dramatis Personae

Gayatri (ST, 46, 3rd grade) has been living separately from her alcoholic husband for the past 11 years. She uses 2 acres of dryland owned by her deceased mother-in-law to cultivate *solam*, groundnut, and cassava. This does not provide her household with enough income, so both her sons work as drivers, for which they are away from home most days in the month, and she herself works as agricultural wage labourer. She lives with her sons and her daughter-in-law (18) in a rented house inside the village because their own home in the land does not have a road, nor a source for water. Her husband is an alcoholic and does not contribute anything to Gayatri or her sons, in fact, frequently he tries to prevent Gayatri from cultivating or harvesting the 2 acres that is in his mother's name. Later Gayatri was altogether prevented from using the land by her husband, so she stopped going even near the land. Gayatri was part of the group of women who went to work in the incense factory in Salem. Gayatri, who separated from her alcoholic husband, was given the land her husband would inherit from her mother-in-law, but now Gayatri's sisters-in-law are demanding a share of that land. It is worth noting that the land was registered in the name of the mother-in-law to keep the land safe from selling it by her drinking husband, the mother-in-law did not express any wish to give part of the land to her daughters. Gayatri expects that she does not have to give her sisters-in-law a share of the actual land, only money, as they are already asking for 1 or 2 lakhs rupees in exchange for officially signing over their share of the land. Gayatri does not have that money, she cannot do what they are asking for. She is expecting to do so in the future, in about two to three years with the help of her sons' incomes, but at the moment her sisters-in-law, who are living in the same village, barely speak to her because of this conflict.

Sethu (ST, 49, 10th grade) is landless and a former village president and currently secretary of the Katuyanur's Forest Rights Committee. He used to work as an electrician, but is now committed to social service, for which he does not receive regular income. He is married to **Rani** (39, 5th grade) who alternates working in their small shop inside their home, working as agricultural wage labourer, and working as a wage labourer in the forest, which is seasonal work organised by the Forest Department. They have four adult children; the eldest, a son (26), is working in Kerala, one son (24) and one daughter (19) are still studying in college and the eldest daughter, **Sona** (22), finished her undergraduate degree and while she was staying at home during my first field visit, she had married and left the house when I came back for my second visit. Sona had chosen her own partner, which her parents had no objections to, even though he was from a different caste (OBC). Their house is built on two adjacent plots: one in name of Sethu's mother, and one given by the government to Rani.

Saravanan (ST, 65, illiterate) is landless and works as agricultural wage labourer specialised in spraying chemicals such as fertilizer, pesticide, insecticide. He has work for approximately 15 days a month, the other days he stays at home, and he works in the whole area around Katuyanur, up until the nearest town.

While he cannot work if it is raining, rains wash away the chemicals, when there is no rain at all for longer periods of time, he does not have any work either. Farmers have his phone number, and share his number with other farmers as well, so he gets his jobs through phone calls and takes his spraying machine with him when he goes to a job on his motorbike. His wife, **Sarada** (55, illiterate), used to work as cook at the village primary school for twenty years, but retired two years ago. Sarada and her daughter-in-law now look after their three calves and do agricultural wage labour. They do not own any land, so they have their cattle graze in the fields of other people when they are not cultivating anything. Their son is away from home most of the time due to his work as lorry driver, so Saravanan and Sarada help their daughter-in-law with the care for their grandson and granddaughter who both attend the village primary school. The daughter-in-law later joined the group of women to work at the incense factory in Salem.

Santhi (ST, 55, illiterate) and her husband (65, illiterate) are both landless agricultural wage labourers. Because they are getting older, that work becomes exceedingly difficult for them. Even though they do not have land, they have two cows, so they can get regular income from selling the milk. They have two adult sons (college graduate, and 10th standard) who are unmarried and stay outside the village for work but sent money home. Their only daughter is married and lives in a different village. During my second stay they were expanding their home and they themselves were also working in the construction of the addition.

Vijay (ST, 50, college graduate) is a farmer coming from multiple generations of farmers. His family was able to keep hold of their arable land while most other ST farmers were forced to sell their lands to families from other communities around 40 years ago. His family's land of 4.5 acres is registered in his mother's name, Pushpa, one of the very few women who own arable land. The land is divided between Vijay and two of his brothers without registration; each cultivates 1.5 acres. Vijay and his wife **Sobia** (35, 5th standard) have one child, a daughter, who studies in college. Cultivating his land does not provide them with enough income to meet expenses so Vijay and Sobia go out for agricultural wage labour to make ends meet.

Pandi (BC, 27, college graduate) is a young, newly married farmer. His wife is still studying in college and is only 18 years old. Pandi completed his BA in engineering but did not like to live away from his mother, a widow, so he chose to become a farmer rather than continue his non-agricultural job. His grandfather owned 21 acres of land and not only gave his 3 sons 6 acres of land each, but also gave 3 acres of his land for his daughters together. The land is still registered in Pandi's grandfather's name, who is now deceased, but he himself is now farming the share of land that his father received while his aunts have given their share of the land to local people for rent. At the back of their house, they rent out a room to Hatsun for the milk bank.

Prema (MBC, 60, illiterate) is a widow. She and her son moved in with her daughter **Radha** (35) and son-in-law after her husband died almost 20 years ago. Her daughter has four school-aged children and her son

(25) and son-in-law both work outside the village. They have 1.5 acres of arable land and cattle. Prema and Radha have the full responsibility to take care of the land and livestock on a daily basis. Their house is near to the ST hamlet, from where they hire the ST villagers as agricultural wage labourers when needed. The majority of the time there are no adult men in their household, but they have a good relationship with the ST villagers, so whenever they need something or when they need to go to town, there is always someone from the hamlet who is willing to help them or drive them there. When I came back to the village for the second round of fieldwork their house was abandoned.

Kumar (BC, 56, 12th grade) and **Anita** (47, 9th grade) are farmers with four acres of land. Kumar's father owned eight acres, but since Kumar has a brother, they each received four acres. His sister did not get a share of his father's land. The land does not provide them enough income, so Kumar regularly drives a private bus for additional income. Anita is one of the very few women who knows how to drive a TVS and uses that regularly to go food shopping at the weekly market or in a nearby town.

Apsana (ST, 34, 1st grade) is a landless woman who works as agricultural wage labourer and takes care of two goats. Her husband (37, 4th standard) works as contractor in the area, mostly in the construction of homes. She has a daughter who recently got married and moved away and her son is still living at home as he is in college. Their house is located in the old part of the ST hamlet and one of the few recently build homes in that part. They have *kootu patta* for their housing plot which is in Apsana's name so they could benefit from the Housing-For-All scheme. Apsana's mother-in-law has all her meals in Apsana's home, although she sleeps at the house of her other son. Apsana goes into the forest regularly to collect fodder for the goats and for collecting firewood. Apsana constantly chews tobacco.

Jaya (ST, 46, 5th grade) and **Mohan** (56, college graduate) are a landless couple with two daughters in college. Mohan works as Fair Price Shop employee while Jaya is an agricultural wage labourer. They do not own any land; Mohan's parents had to sell all their land (60 acres) to avoid starvation. Jaya also takes care of the bullock they raised to sell. When the group of women from the village went to work in an incense factory in Salem, Jaya could not join because she had to be home regularly during the day to take care of the bullock.

Priti (ST, 34, 10th grade) is a widow with two teenage children. She is denied use of land by her brothers-in-law, she was only allowed to keep their house in the ST hamlet. Since she would be staying there alone with two teenage children, particularly a teenage daughter, she feels it is unsafe to stay there. In the house in the ST hamlet she would have sole responsibility to take care of her households and would thus need to go out for work with no one there to watch over the children. She therefore moved her household to live with her parents so the care of the two children is shared and they are never left home alone. The house in the ST hamlet she is renting out. She does not make much money from that, but she does not want to sell it either since she wants her son to have it later for his family as it is his father's property. She works

occasionally as a tailor for her neighbours, but their household's main income comes from cultivation and milk sales.

Anuja (ST, 22, 10th grade) married her mother's brother who works in a team that harvests sugarcane on contract basis. Anuja herself does not really work, only when she is bored being at home alone, she joins other women with agricultural wage labour. Her husband received 0.5 acres of land as early inheritance, but due to some problems within the family they are not using that land. Instead of living with her husband's family in their land they are staying in a rented house in the ST hamlet. When I came back to the village for my second fieldwork, she was no longer staying in the ST hamlet but had moved back to the house of her parents-in-law.

Ambika (MBC, 33, 6th grade) is a farmer and cattle keeper. Her husband works as a daily wage labourer for the railways and thus leaves Ambika home alone to care for the land, the cows, the household, and two young children. They cultivate 1 acre of land, but do not have any irrigation facilities. The *patta* is still registered in her father-in-law's name, and thus they cannot take out a loan to invest in the land, particularly in irrigation. As a consequence, their land's productivity is very low, demotivating Ambika and her husband to put much time and effort in their land.

Amudha (ST, 37, illiterate) is a farmer and agricultural wage labourer. Her husband, also illiterate, is unable to work due to health problems, which means that Amudha is the household's sole earner. They have one son, who is in secondary school. They have 3 acres arable land which her husband owns, but agricultural wage labour is their household's main income. Their land has an open well, but it is dry most of the year, which means they can only cultivate rain-fed crops and Amudha has to get water from the ST hamlet every day for household use. Their house also has no private road, which means that they struggle to remove the harvest from their land. The relationship with the neighbour is in bad; they cannot cross the neighbour's land, not even by foot and Amudha's home only got electricity in 2017 because the electricity line needed to go over this neighbour's land and required a utility post on the neighbour's land, which they did not allow until 2017.

Appendix II – The Household Food Insecurity Access Scale

The Household Food Insecurity Access Scale is developed by USAID’s Food and Nutrition Technical Assistance Project (FANTA) and its partners.

For this study I used the publicly available *Household Food Insecurity Access Scale (HFIAS) for Measurement of Household Food Access: Indicator Guide (v. 3)*, published in August 2007 (Coates, Swindale and Bilinsky, 2007).

The measurement comprises nine questions. Each interviewed household member is asked to answer all these nine questions, and if the answer to a question is yes, it is immediately followed by a frequency question for the past four weeks. Rarely refers to once or twice, sometimes to three to ten times, and often to exceeding ten times.

		Never	Rarely	Someti mes	Often
1.	In the past four weeks, did you worry that your household would not have enough food?				
2.	In the past four weeks, were you or any household members not able to eat the kinds of foods you/they preferred because of a lack of resources?				
3.	In the past four weeks, did you or any household members have to eat a limited variety of foods due to a lack of resources?				
4.	In the past four weeks, did you or any household members have to eat some foods that you/they really did not want to eat because of a lack of resources to obtain other types of food?				
5.	In the past four weeks, did you or any household members have to eat a smaller meal than you/they felt you/they needed because there was not enough food?				
6.	In the past four weeks, did you or any household members have to eat fewer meals in a day because there was not enough food?				
7.	In the past four weeks, was there ever no food of any kind to eat in your household because of lack of resources to get food?				
8.	In the past four weeks, did you or any household members go to sleep at night hungry because there was not enough food?				
9.	In the past four weeks, did you or any household members go a whole day and night without eating anything because there was not enough food?				

For calculating the HFIAS score, each answer gets a score (never = 0, rarely = 1, sometimes = 2, often = 3) and all of these separate scores are added up resulting in a HFIAS score range between 0 and 27. The higher the score, the more food insecure a household is.

Appendix III – Access to Food Categories Survey Questionnaire

Food Access Category	Caste	Ownership over arable land - Size Category	Household Main Livelihood	Patta within household?	Do you own a well?
Food Secure	BC	Big	Farming	Yes	no
Food Secure	BC	Big	Farming	Yes	yes
Food Secure	BC	Big	Farming	No	yes
Food Secure	BC	Small	Farming	No	yes
Food Secure	BC	Small	Farming	Yes	yes
Food Secure	BC	Small	Farming	Yes	yes
Food Secure	MBC	-	Farming	-	yes
Food Secure	MBC	Big	Farming	No	yes
Food Secure	MBC	Small	Farming	Yes	no
Food Secure	MBC	Small	Farming	Yes	yes
Food Secure	MBC	Small	Agricultural Wage Labour	Yes	?
Food Secure	MBC	Marginal	Farming	No	no
Food Secure	MBC	Marginal	Farming	No	no
Food Secure	MBC	Marginal	Farming	Yes	no
Food Secure	MBC	Marginal	Farming	Yes	no
Food Secure	MBC	Marginal	Farming	Yes	yes
Food Secure	MBC	Marginal	Agricultural Wage Labour	?	?
Food Secure	SC	-	Farming	-	no
Food Secure	ST	-	Agricultural Wage Labour	-	-
Food Secure	ST	-	Agricultural Wage Labour	-	-
Food Secure	ST	-	Agricultural Wage Labour	-	-
Food Secure	ST	-	Agricultural Wage Labour	-	-
Food Secure	ST	-	Agricultural Wage Labour	-	-
Food Secure	ST	-	Agricultural Wage Labour	-	-
Food Secure	ST	-	Agricultural Wage Labour	-	-
Food Secure	ST	-	Agricultural Wage Labour	-	-
Food Secure	ST	-	Agricultural Wage Labour	-	-
Food Secure	ST	Big	Farming	No	yes
Food Secure	ST	Big	Farming	No	yes
Food Secure	ST	Big	Farming	Yes	yes
Food Secure	ST	Small	Agricultural Wage Labour	Yes	?
Food Secure	ST	Small	Agricultural Wage Labour	Yes	?
Food Secure	ST	Marginal	Farming	No	yes
Mildly Food Insecure	MBC	-	Farming	-	no
Mildly Food Insecure	MBC	Marginal	Farming	Yes	yes
Mildly Food Insecure	MBC	Marginal	Farming	Yes	yes
Mildly Food Insecure	ST	-	Agricultural Wage Labour	-	-
Mildly Food Insecure	ST	-	Agricultural Wage Labour	-	-

Mildly Food Insecure	ST	-	Agricultural Wage Labour	-	-
Mildly Food Insecure	ST	Marginal	Farming	No	no
Moderately Food Insecure	BC	-	Agricultural Wage Labour	-	no
Moderately Food Insecure	MBC	-	Farming	-	yes
Moderately Food Insecure	MBC	-	Agricultural Wage Labour	-	-
Moderately Food Insecure	MBC	Small	Farming	Yes	yes
Moderately Food Insecure	MBC	Marginal	Farming	No	yes
Moderately Food Insecure	SC	Big	Farming	?	?
Moderately Food Insecure	ST	-	Agricultural Wage Labour	-	-
Moderately Food Insecure	ST	-	Agricultural Wage Labour	-	-
Moderately Food Insecure	ST	-	Agricultural Wage Labour	-	-
Moderately Food Insecure	ST	-	Agricultural Wage Labour	-	-
Moderately Food Insecure	ST	-	Agricultural Wage Labour	-	-
Moderately Food Insecure	ST	-	Agricultural Wage Labour	-	-
Moderately Food Insecure	ST	-	Agricultural Wage Labour	-	-
Moderately Food Insecure	ST	-	Agricultural Wage Labour	-	-
Moderately Food Insecure	ST	Small	Farming	Yes	yes
Moderately Food Insecure	ST	Small	Farming	Yes	yes
Moderately Food Insecure	ST	Small	Farming	Yes	yes
Moderately Food Insecure	ST	Small	Agricultural Wage Labour	Yes	yes
Moderately Food Insecure	ST	Marginal	Farming	Yes	yes
Moderately Food Insecure	ST	Marginal	Farming	?	yes
Moderately Food Insecure	ST	Marginal	Agricultural Wage Labour	Yes	yes
Severely Food Insecure	BC	Marginal	Agricultural Wage Labour	No	no
Severely Food Insecure	MBC	-	Agricultural Wage Labour	-	no
Severely Food Insecure	MBC	Big	Farming	No	yes
Severely Food Insecure	MBC	Big	Farming	Yes	yes
Severely Food Insecure	MBC	Small	Farming	No	yes
Severely Food Insecure	MBC	Marginal	Farming	Yes	yes
Severely Food Insecure	MBC	Marginal	Farming	Yes	yes
Severely Food Insecure	MBC	Marginal	Farming	Yes	?
Severely Food Insecure	MBC	Marginal	Agricultural Wage Labour	Yes	no
Severely Food Insecure	MBC	Marginal	Agricultural Wage Labour	Yes	yes
Severely Food Insecure	SC	-	Agricultural Wage Labour	-	-
Severely Food Insecure	SC	Small	Farming	No	yes
Severely Food Insecure	SC	Marginal	Farming	No	yes
Severely Food Insecure	ST	-	Farming	-	?
Severely Food Insecure	ST	-	Agricultural Wage Labour	-	-
Severely Food Insecure	ST	-	Agricultural Wage Labour	-	-
Severely Food Insecure	ST	-	Agricultural Wage Labour	-	-
Severely Food Insecure	ST	-	Agricultural Wage Labour	-	-
Severely Food Insecure	ST	-	Agricultural Wage Labour	-	-
Severely Food Insecure	ST	-	Agricultural Wage Labour	-	-
Severely Food Insecure	ST	-	Agricultural Wage Labour	-	-
Severely Food Insecure	ST	-	Agricultural Wage Labour	-	-

Severely Food Insecure	ST	-	Agricultural Wage Labour	-	-
Severely Food Insecure	ST	-	Agricultural Wage Labour	-	-
Severely Food Insecure	ST	-	Agricultural Wage Labour	-	-
Severely Food Insecure	ST	-	Agricultural Wage Labour	-	-
Severely Food Insecure	ST	-	Agricultural Wage Labour	-	-
Severely Food Insecure	ST	-	Agricultural Wage Labour	-	-
Severely Food Insecure	ST	-	Agricultural Wage Labour	-	-
Severely Food Insecure	ST	-	Agricultural Wage Labour	-	-
Severely Food Insecure	ST	Small	Farming	No	yes
Severely Food Insecure	ST	Small	Agricultural Wage Labour	?	yes
Severely Food Insecure	ST	Small	Agricultural Wage Labour	Yes	yes
Severely Food Insecure	ST	Marginal	Farming	?	yes
Severely Food Insecure	ST	Marginal	Farming	Yes	yes
Severely Food Insecure	ST	Marginal	Farming	Yes	yes
Severely Food Insecure	ST	Marginal	Agricultural Wage Labour	No	no
Severely Food Insecure	ST	Marginal	Agricultural Wage Labour	No	no
Severely Food Insecure	ST	Marginal	Agricultural Wage Labour	Yes	no
Severely Food Insecure	ST	Marginal	Agricultural Wage Labour	?	no
Severely Food Insecure	ST	Marginal	Agricultural Wage Labour	?	yes