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**Agrarian Accumulation in Liberalised
India: A Study of Capitalist Farmers in
Punjab**

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Thesis submitted for the degree of PhD

2017

Department of Development Studies

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Declaration for SOAS PhD thesis

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Abstract

This research studies how agrarian accumulation in India has been reconfigured by liberalisation of the economy. It does so by focusing on accumulation strategies of capitalist farmers in Punjab, India's archetypal Green Revolution state.

The research concludes that agrarian accumulation is continuing in Punjab under liberalisation, although more precariously than before. State procurement of wheat and paddy from Punjab's wholesale markets continues to be a major factor supporting this. Some capitalist farmers have also been able to create new spaces for accumulation under the changed circumstances, not least through selective engagement with corporates' strategies. Therefore, I argue that there is no overarching agrarian crisis in India. However, at the same time, risks have multiplied as various other forms of State support have been reduced – with more reductions in the pipeline. Moreover, conditions in the wider economy have made established strategies of expanding accumulation or averting risk, as the case may be, by investing in land or non-agricultural avenues, both riskier and increasingly less accessible to even many capitalist farmers.

The research also finds that agricultural markets are crucial to the process of agrarian accumulation in Punjab. By studying multiple commodities, I show that farmers must negotiate different kinds of market structures over a single agricultural year in order to accumulate within agriculture. These markets involve different risks and carry different kinds of significance for capitalist farmers. An understanding of agrarian capitalism in Punjab, therefore, needs to account for its agro-commercial actors and processes more than it has so far. Finally, although the focus of this study is on capitalist farmers and not the entire spectrum of agrarian classes, the findings also suggest continuing differentiation among the landowning classes.

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List of Abbreviations

AoA	Agreement on Agriculture
APMC	Agricultural Produce Market Committee
AP	Andhra Pradesh
BJP	Bharatiya Janta Party
BKU	Bharatiya Kisan Union
CACP	Commission for Agricultural Costs and Prices
DAP	Di-ammonium Phosphate
FCI	Food Corporation of India
FDI	Foreign Direct Investment
GM	Genetically modified
GDP	Gross Domestic Product
HYV	High-yielding varieties
IAAP	Intensive Agricultural Area Programme
IADP	Intensive Agricultural Development Programme
KCC	Kisan Credit Card
LR	Lady Rosetta
MSP	Minimum Support Price
NH	National Highway
NSSO	National Sample Survey Office
NCDEX	National Commodity and Derivatives Exchange
NCPH	Non-cultivating peasant households
NRI	Non Resident Indian
OP	Open pollination

PTI	Press Trust of India
PACS	Primary Agricultural Cooperative Society
PEG	Private Entrepreneurs Guarantee
PDS	Public Distribution System
PAU	Punjab Agricultural University
PUDA	Punjab Urban Development Authority
SC	Scheduled Castes
SAD	Shiromani Akali Dal
TNC	Transnational Corporations
UP	Uttar Pradesh
WTO	World Trade Organisation

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Chapter 1. Introduction

In the summer of 2017 farmers from across the states¹ of Tamil Nadu, Maharashtra, Punjab, Madhya Pradesh and Assam staged protests to solicit support from the State towards ameliorating their plight. Farmers' concerns included ecological distress, unprofitable crop prices, rising costs and indebtedness. As both a response to these protests and in competition with the current Uttar Pradesh (UP) state government that announced a farm loan waiver within a month of its election in March 2017, other state governments such as Karnataka, Maharashtra and Punjab also introduced loan waiver schemes that are both popular and populist. This hyper-visibility of farmers *in crisis* is not entirely new. Over the past two decades or so, growing numbers of farmer suicides in India have been reported in popular media and studied by some committed journalists and academics. While it is telling that the political class has only been galvanized into some kind of action due to political considerations and not by the death of farmers, it is the idea of agrarian crisis itself that this research takes as its point of departure.

Since the early 1990s, i.e. the time when liberalisation was decisively introduced in India, agriculture has been neglected within development policy or rather the assumptions about agricultural development have changed. The significance of State support to agriculture has been replaced by the role of the private sector. Many scholars on the Left have argued that the State has set the scene for large corporations – domestic and transnational – to dominate Indian agriculture and earn profits at the expense of exploited farmers (Patnaik 2011). Declining State support has also set into motion other kinds of processes such as revival of the power of the informal sources of credit, and reinforced the unviability of the ever-increasing numbers of small and marginal holdings (Ramachandran and Rawal 2009). The agricultural crisis is also argued to be one of the key reasons for the increasing rural to urban migration of members of farming households, despite the lack of secure and formal employment.

¹ In this thesis, 'State' is used to refer to the abstract government apparatus while 'state' or 'state government' refers to the sub-national administrative unit.

While the above is both true and disconcerting, I believe that it is insufficient in terms of social science analysis because it assumes farmers to be a unified category across space and time. Further, it can lead us towards writing an obituary of ‘the agrarian’ without a grounded understanding of the processes underlying agrarian change. This perspective is derived from the theoretical framework of critical agrarian political economy which is the lens through which this research has been conducted.

Critical agrarian political economy is based on Marxist political economy that locates class relations at the centre of social change (Bernstein 2010). Applied to agrarian studies, this framework allows us firstly, and most importantly, to view the agricultural population as constituted by the distinct classes of labour and capital. Although distinct, these classes are also constituted relationally, that is, capital exists because of its ability to appropriate surplus produced by labour while labour reproduces itself by working for capital. The interests of each class are, therefore, not only linked but also often in conflict with each other, and this informs their politics as well. This also means that policies and institutions have different implications for each class. The approach recognizes that these classes would be constituted differently in different socio-historical contexts and that class relations will intersect with non-class social identities and broader historical trajectories of development to create specific dynamics of agrarian change. Methodologically, this implies the significance of rigorous empirical work to delineate the various social actors and processes in any region.

Using this lens, some scholars on the Left have argued that the Indian agrarian crisis is not a crisis for everyone in agriculture. It is certainly a crisis for the labouring classes and the small and marginal farmers who constitute the majority of the agrarian population, but not necessarily for the agrarian capitalists, a category which includes large capitalist landlords and capitalist farmers (Lerche 2013). However, no study has yet focused on these capitalists and tried to understand agrarian change through their accumulation strategies since the 1990s. This research seeks to fill this gap by focusing on agrarian accumulation.

The literature on agrarian transitions informs us that capital accumulation by capitalist farmers and landlords is a key driver of agrarian change (Byres 1986). The

particular form that this might take in different regions shapes not only rural class formation but also the surplus available for investments beyond agriculture. A focus on patterns of agrarian accumulation allows us to place such capitalist farmers and landlords at the centre of analysis and understand how they are negotiating the changes that have occurred under liberalisation and to what effect.

From the perspective of pro-labour, radical politics, it may be questioned why it is necessary to speak of capital and accumulation in a period in history when the scales are tilted so heavily against labour and all who are marginalised and oppressed. However, analytically and perhaps also politically, it is hardly useful to paint all developments in black and white. If we accept that India is a class divided society, it is important to understand whether there is a class of agrarian capital that is benefitting from liberalisation and if so, in what ways – where the interests of this class lie, if they are shifting, if this has implications for how the class itself is constituted, and how it is placed vis-à-vis other rural classes. Such an analysis also prevents us from making *a priori* assumptions about the effects of globalisation and liberalisation on Indian agriculture and helps us move towards an analysis that can account for historical contingencies as well as agency of different farmers.

I study the process of accumulation in terms of some of the common tropes of the crisis' causes. The first is the rising costs of production and inadequate returns to investment. This research will try to understand which liberalisation reforms have contributed to this and how they might affect different classes of farmers. This impact will also presumably differ by nature of the commodity produced, and this forms a crucial axis of analysis in this research. Agrarian labour relations are considered a part of this rubric and assessed from the point of view of the capitalist farmer, not as a separate area of enquiry. It is taken for granted that value is created by labour in the production process and is appropriated by the capitalist. But the focus here is on the extent to which farmers succeed in accumulating and *continue* accumulation under liberalisation. This is linked in the literature to a number of other aspects and conditions that are also under-researched.

The second most commonly identified cause of crisis is exploitation by traders and corporates. Since India has historically had many regionally powerful trading castes and communities, they are often held responsible for exploitation of farmers.

Whenever there are sharp hikes in the prices of essential food items combined with low farm-level prices for farmers, the role of traders in hoarding and speculation is raised. In more recent years as Foreign Direct Investment (FDI) in food retail has become an issue of heated debate, the removal of traders or ‘middlemen’ is argued to be crucial to improve ‘efficiency’. Local traders also often work as moneylenders who lend to farmers at exploitative rates, argued to be an important factor resulting in many farmers’ chronic indebtedness. The role of traders, therefore, is also important to study in terms of credit, something endemic among all capitalist endeavours.

Corporate organisations also operate to control upstream or downstream aspects of agricultural commodity production. The issues around this are exemplified by highly contentious debates around the introduction of genetically modified (GM) seeds in agriculture and the exploitative role of companies such as Monsanto in causing farmer suicides (Shiva 1992). Contract farming represents another development where battle lines are drawn regarding whether or not it is beneficial for farmers. Scholars have argued that transnational capital in agriculture has pauperized and marginalized farmers not just in India, but the world over (McMichael 2005; Weis 2007). The realm of the agricultural market is, therefore, absolutely crucial to understand how capitalist farmers are accumulating under liberalisation (Harriss-White 1996, 2008). Thus, this research will study how different kinds of farmers relate to different kinds of traders, including corporates. It should be noted that this is not a study of traders and markets per se, but of traders *in relation to* farmers.

Finally, there is the issue of economic diversification of farming households, widely discussed in academic literature (Lerche 2014). In some ways an effect, rather than a cause of agrarian crisis, it is nevertheless an important and disputed area of enquiry as it is much debated if accumulation by capitalist farmers can lead to overall economic development and reinforcement of their dominant class position in agrarian and wider society. This discussion can also help us think about the possible directions that agrarian change might take in the near future.

The research focuses on Punjab in north-western India, the quintessential Green Revolution state of India to explore these issues. It was home to well-entrenched agrarian capital well before liberalisation happened, and therefore it presents a useful

case to understand the trajectory of agrarian accumulation in India. It is one of the richest states in India in terms of per capita income and is known to have some of the country's most successful and politically powerful capitalist farmers. In this sense, Punjab is an extreme case of agrarian accumulation and cannot be considered representative of the national situation. Given its agricultural profile, if there is a region of the country where accumulation can be expected to be continuing in liberalised India, it is Punjab. But, even here, the existing literature tells us that the story of agricultural prosperity is limited and fast going bust in the 21st century. The tropes that support this narrative are similar to those discussed earlier for the country at large. This research will, therefore, explore whether there are any tensions in this narrative based on the theoretical perspective outlined earlier, and potentially contribute to an extension of the well-known story of agrarian accumulation in Punjab beyond the Green Revolution.

In view of the above discussion, it is now possible to identify the key research question: *How has agrarian accumulation in Punjab been reconfigured by liberalisation of the Indian economy?* This will be discussed through the following sub-questions:

- i. Is accumulation within agriculture continuing?
- ii. Which liberalisation reforms introduced by the State are having an impact on accumulation?
- iii. Which social relations matter for accumulation, and how are they changing vis-à-vis liberalisation?
- iv. How are different kinds of capitalist farmers negotiating these changes?

1.1 Chapters

The dissertation is divided into three parts. The first details the theoretical debates within which this research is set and seeks to contribute to. The literature on capitalist farming and farmers in India and Punjab, and to some extent outside of India, is then reviewed and empirical gaps are identified. Chapter 2 addresses theories and concepts, Chapter 3 issues characterizing Indian agriculture and Chapter 4 agricultural issues specific to Punjab.

Part II is on the methodology and experience of fieldwork (Chapter 5). Here, I discuss how the research problem was made operational, and the rationale and

process of selecting the fieldwork site. A discussion of the research methods used and their limits follows. The last part of this chapter reflects on the methodological challenges of this research, both in terms of the theoretical framework as well as my subjectivity as a researcher.

Part III discusses the empirical data gathered through fieldwork. Chapter 6 describes the field based on older secondary literature and my observations. Chapter 7 analyses the agricultural production and marketing patterns in the field area. It is divided into four sections, each focusing on a different agricultural commodity. Here I discuss aspects of costs and returns to investment, as well as the different kinds of traders, including corporates, involved in each commodity.

The next two chapters are on aspects that fundamentally shape the possibilities of accumulation through agriculture. Chapter 8 focuses on land, with a detailed discussion of the dynamics of leasing and buying or selling land. It reflects on the ways in which land constitutes an asset for different classes of farmers. Chapter 9, on credit relations, discusses the main sources of formal and informal credit and analyses them in relation to each other. It shows how farmers may or may not be caught in cycles of indebtedness. The final chapter of this part, Chapter 10, examines farmers' economic diversification. It describes the strategies of diversification that are accessible and attempted by different farmers, linking them to issues of the wider economy and attempts a classification of patterns of accumulation. Chapter 11 summarizes the main findings of this research, relates them to agricultural developments beyond the field site and draws out the main theoretical contributions to a better understanding of agrarian accumulation and agrarian change in India.

Part I: Theoretical Framework and Literature Review

Chapter 2. Key Theoretical Debates

The focus of this research is capital accumulation in agriculture in India and its reconfiguration as a result of liberalisation. In the previous chapter, I argued that this focus was important in order to understand whether an all-encompassing crisis for all agrarian classes in the period of liberalisation really exists, and thereby to explain the processes underlying agrarian change. In order to do this, we need to understand the nature of capitalist agriculture, the role of markets and traders, and the various agricultural and non-agricultural investment strategies of capitalist farmers.

This research was conducted within the framework of critical agrarian political economy, at the core of which lies an understanding of historically developed class relations. Based on this, this chapter first surveys the literature for what constitutes capitalist agriculture today and how this relates to debates on the nature of agrarian transition in the developing world. These debates have been central to the understanding of the state of world agriculture in the 21st century. This is followed by a discussion of how a capitalist farmer can be defined, and how previous studies have identified such farmers and their accumulation patterns both in India and abroad. The next part of the chapter focuses on agricultural markets and examines the veracity of a common view of traders within political economy, i.e. traders constitute a parasitical class that exploits farmers. It also identifies different kinds of questions that can be asked of their role and the structure of markets. Given the power of corporates in global agricultural markets, the literature on their impact on producers is also surveyed. Finally, the chapter raises the issue of how the nature of the commodity involved matters in patterns of accumulation by capitalist farmers.

2.1 Capitalist Agriculture and Agriculturists

The research problem firstly begs the question of what is meant by capitalist agriculture. Here it is useful to refer to the distinction between farming and agriculture made by Henry Bernstein. Farming, he argues, is the work on soil that farmers have always done. Agriculture, on the other hand, is ‘farming together with all those economic interests and their specialized institutions and activities,

“upstream” and “downstream” of farming, that affect the activities and reproduction of farmers’ (2010, 65). Agriculture emerged as a sector under capitalism due to the social division of labour and the emergence of a distinct industrial sector.

Two things should be noted about this articulation. Firstly, to use Harriss-White’s (2016b) comment on another concept (*‘filières vivrières’*) studied and applied by Bernstein, it allows for an ‘expanded conception of what is agrarian’ (483). It includes not only the process of production but also the pre- and post-harvest market dynamics and the institutional framework(s) within which these are carried out. Market dynamics or the process of exchange or of circulation is often neglected or given lesser importance in agrarian studies. This expanded notion of agriculture thus creates space for the study of markets and traders of different kinds and at different spatial levels as a part of agrarian dynamics. I return to this below.

The second point is that while it expands the idea of the agrarian, by marking it as a distinct sector comparable to industry, it also (perhaps unintentionally) reasserts an internal logic of agriculture. This issue gained relevance in view of some aspects of the debate between Bernstein and Byres on the contemporary relevance of the agrarian question.² Byres (1986, 1996) argues that development of capitalist agriculture is central to overall industrial development through capital transfer. Bernstein (1996) critiques him for adopting an ‘internal logic’ approach to the understanding of the agrarian question, arguing that in the 21st century, ‘generalized commodity production’ is widespread and international circuits of capital can now be the source of industrial accumulation. In his response, Byres (2003, 2016) does not challenge the relevance of the ‘external’ per se, but argues that assuming away the significance of agrarian transitions represents a kind of world-historical determinism.

These differences notwithstanding, it is now commonly accepted that the concrete empirical investigation of a given context needs to incorporate both the processes internal to agriculture and relevant dynamics outside it. This research attempts the same. Such an approach can be especially useful in understanding aspects of agrarian

² The Bernstein-Byres debate on the agrarian question per se is of limited relevance here since the setting of this research is well past the moment of agrarian transition to capitalism, the core concern of the debate.

change in a post-transition context in the globalised world-historical moment, but it does present methodological challenges: these are discussed in Chapter 5.

2.1.1 *Capitalist Farmers*

Having identified the broad contours of capitalist agriculture and its relevance, we need to identify who the capitalist farmer is. The mode of production debate in India was one of the key debates that explored this question. Succinctly summarized by Alice Thorner in a series of articles in the *Economic and Political Weekly* (1982a, 1982b, 1982c), the discussion began with Daniel Thorner's reference to the appearance of 'gentleman farmers' in the late 1960s. At the end of a heated debate on whether such farmers necessarily represented the emergence of capitalist farmers, Utsa Patnaik's conceptualisation emerged as the most widely accepted. According to Patnaik (1971a, 1971b, 1986, 1987), the key features of a capitalist farmer include labour exploitation, control over means of production, production for the market and, perhaps most importantly, reinvestment of surplus into agriculture in order to expand it or 'the degree of capital intensification' (Patnaik 1971a, A-126).

In this context, Patnaik (1972) also makes an important distinction between size – owned or operational – and scale, i.e. 'economic size of the land' (1613). She argues against conflating the two when land-augmenting technologies are being introduced, although concedes that they may coincide when techniques become uniform. On this basis, Patnaik also strongly criticizes the association of landholding sizes with class position (see also Patnaik 1987).

Byres (1981) makes a similar point when he argues that capital intensification would imply that even small landholdings could belong to a rich peasant or capitalist. However, in his 1981 study of class formation in the Indian countryside, he used size as a proxy for class on the grounds that, at that time, capitalism had not penetrated north-west India deeply enough for productivity to be detached from size. More recently, based on his research in West Bengal, India, Rakshit (2011) makes a similar argument about land sizes but concluded that scale economies overlapped significantly with capital intensification in technologically advanced regions and less so in backward regions. This indicates that while, in theory, land size and class positions are incongruous, they may be compatible if capitalism in agriculture has taken root.

Outside the Indian context, Oya (2004) has analysed differentiation within large- and mid-scale farmers in Senegal. He argues that within classes defined by size, different trajectories may be identified on the basis of the historically contingent ways in which they appropriate surplus and accumulate. Using the criteria of labour relations, land use/ownership, degree of capitalisation, education and patterns of surplus use, Oya identifies three categories of farmers – non-capitalist, semi-capitalist and capitalist. He asserts that this is a preliminary classification for the Senegalese context and indicates a ‘continuum of tendencies’ rather than reified categories (309). Following on from this, Oya (2007) has drawn on life histories of rural capitalists to further tease out the process underpinning rural accumulation in Senegal. Classifying apparently homogenous categories of rich/poor/large/small farmers in terms of the tendencies or patterns of accumulation trajectories could also be particularly useful in studying agrarian change in well-developed agrarian capitalist contexts: this study attempts to identify such tendencies.

Zhang (2015) has combined primarily qualitative data on property relations and market participation (in markets for land, labour, product and means of production) of farming households in order to arrive at five distinct class positions in rural China – capitalist employers, petty bourgeoisie, dual-employment households, wage workers and subsistence peasants. Capitalist farmers may be corporate farm managers or entrepreneurial farmers who represent small private capital. The latter are formally classified as ‘family farms’ but in reality, they are mostly family-owned or family-managed rather than family-worked. The emergence of these farmers is attributed to access to political resources as well as to the accumulation from below due to skill premium. Like Oya (2004), Zhang also argues that he uses the classification as a heuristic device to understand the underlying processes of agrarian change in rural China. Moreover, commonly studied through quantitative data, his use of qualitative data to delineate a differentiated class structure also opens up new ways of approaching this subject methodologically.

2.1.2 *Capitalist Farmers in India*

After four decades of the mode of production debate, it is widely agreed that Indian agriculture presents a form of capitalist agriculture.³ At the same time, it is also

³ However, different Left parties in India have different understandings of this, with the Communist Part of India (Maoist) and Communist Party of India (Marxist-Leninist) arguing that India is still

agreed that the nature of this agrarian capitalism varies considerably across different regions of the country. In the southern Indian state of Tamil Nadu, for example, John Harriss (1982) argues that class differentiation was underway but constrained by the fragmentation of holdings and, more so, by the domination of ‘merchant-usurers’ capital’ (294). Athreya et al. (1990) argue, on the other hand, that wet areas of Tamil Nadu had more polarized class structures than dry areas.

Some recent studies have tried to identify the accumulating classes in Indian agriculture. Ramachandran (2011) argues that the Indian countryside is dominated by landlords and capitalist farmers. These classes own the largest landholdings and their members do not participate in any manual agricultural work. The difference between the two, however, rests in their origins.⁴ The capitalist farmers are not traditional landlords and were most commonly rich peasants or upper-middle peasant households. They emerged powerful owing to a relatively more recent history of success in agriculture and/or through the re-investment of surpluses made elsewhere. Earlier, he noted that they could belong to traditionally dominant castes or be from upwardly mobile backward castes (Ramachandran et al 2010). Despite the differences in their origins, the economic behaviour of these two groups is identical (Lerche 2013).

Ramachandran et al (2010) state that a class of rich peasants also accumulates. This peasantry or ‘petty producers’ includes households whose members perform at least some, if not all, of the manual work in agriculture. They divide the peasantry into rich, middle and poor peasants. Although they argue that it is difficult empirically to draw neat distinctions between the three categories, in their survey of villages in Andhra Pradesh (AP), they found that the rich peasants constitute a distinct category since they were ‘characterized by substantial accumulation of capital, low labour ratios and high incomes’ (30).

Lerche (2013) also argues that existing empirical studies suggest that peasant petty commodity producers (henceforth petty producers) in at least some regions of the country are able to accumulate. Notably, his use of the term petty producers differs

semi-feudal (Lerche 2013). Lerche (ibid.) and Harriss (2013) have argued that aspects of semi-feudalism (such as landlordism or attached labour relations) have been either transformed or subsumed within capitalism.

⁴ Chapter 3 gives a historical overview of the origin of landlords in India.

from that of Ramachandran (2011). For the latter, petty producers are simply the agriculturists that lie between the landlords and capitalist farmers, and the wage workers. Lerche, on the other hand, draws on Bernstein's (1988) conceptualisation of petty commodity production which combines the contradictory class position of both capital and labour, making it inherently unstable. In China, Zhang (2015) argues, petty producers can reproduce on an expanded basis, contingent on factors such as technological improvements and state interventions, and that they are subject to tendencies of differentiation. In this research, therefore, I work with the assumption that landlords, capitalist farmers who may or may not work on their land, as well as some petty producers may be accumulating. Further, it would be reasonable to expect competition between them.

Finally, a discussion of capitalist agriculture would be incomplete without reference to the state of labour relations. Labour relations, especially the employment of attached labour, have been an important element of debates on agrarian capitalism in India. This was also a key aspect of the mode of production debate referred to above. While widespread use of free wage labour is considered one of the features of capitalist production, it is now widely accepted that sharecropping, certain kinds of tenancies and attached labour conditions are also entirely compatible with capitalist production: labour relations may outwardly appear to have pre-capitalist features but they operate within a capitalist logic of production. However, since it is not a focus of this study, labour will be studied only as an element of cost for farmers and as an indicator of whether or not farmers do any manual work on their own farms.

This survey shows that the literature on capitalist farmers in India is rich but continues to be limited to the dynamics within agriculture. I explained earlier that capitalist agriculture also needs to be understood in relation to forces beyond agriculture. Both Zhang (*ibid.*) and Oya (2004, 2007) have accounted for non-farm investments, actors and/or political processes in their analyses of the emergence of capitalist farmers and their accumulation strategies and this helps in identifying patterns of differentiation within agriculture. Over the last few decades, studies from across India have highlighted that capitalist farmers are increasingly diversifying into other economic avenues (Chapter 3) and Section 2.2 discusses how agricultural markets can impact accumulation strategies of capitalist farmers. The neglect of

these aspects in the vast majority of the literature on capitalist farming in India is a limitation that this research seeks to address.

Having established the outline of the analytical framework within which I study capitalist agriculture, the chapter now moves on to a relatively less discussed aspect of the capitalist agrarian economy but one which is crucial to our research problem.

2.2 Agricultural Merchants and Markets

As mentioned in Chapter 1, merchants/traders are often held to be a cause of farmer distress. In the current period of liberalisation and agrarian ‘crisis’, this narrative has come to the fore yet again. Moreover, as discussed earlier, markets are an integral element of agriculture in the contemporary world. One of the key aims of this project, therefore, is to explore how these merchants and market processes intersect with the process of agrarian accumulation. Within critical political economy, these actors and processes are often discussed through the analytical category of merchant’s capital, which is where this discussion will begin.

2.2.1 Merchant’s Capital in Agriculture

In Volume III of *Capital*, Marx (1894) argues that, in its stripped-down version, pure merchant’s or mercantile capital is capital that is engaged solely in the purchase and sale of commodities. It is not just this function that is a mark of merchant’s capital but the fact that money is advanced to make more money. Without this, it is simply the function of marketing or circulation which may be performed even by the producer himself. Marx notes clearly that in its pure form merchant’s capital is unproductive, i.e. it ‘does not create either value or surplus-value, at least not directly’ (Chapter 16, n.p.). Nevertheless, merchant’s capital is recognized as capable of aiding production and the circulation of money as a necessary part of social reproduction.

Banaji (2016) combines these concepts with historical evidence on colonialism and agriculture across the world in the 19th and the 20th centuries to argue that merchant’s capital cannot be viewed as being limited to the sphere of circulation. This is because there are many cases where merchant’s capital has proactively shaped the process of production. Banaji also argues that this capital is never found in its pure form and makes this an integral part of his analysis. The ‘impurity’ or ‘hybridity’ of mercantile capital, most commonly occurring with interest-bearing

capital and sometimes with land rent or industrial capital, is in fact crucial to his argument that it should be considered an integral part of productive processes. He describes three different patterns of domination of agriculture by merchant and industrial capital (as distinct from standard agrarian capitalism),⁵ namely, produce trades, contract farming and vertical integration. Commercial capitalism of the produce trades is the subsumption of households within wider circuits of capitals through the operation of a “‘hierarchy of financial and commercial relationships” distributed across commodity chains’ (414). This often involved advances across different levels and especially at the lowest levels whereby credit was extended to producers of commodities (peasant households). Trade in Malwa opium, Chinese tea and Senegalese groundnuts are some of the examples he gives. The second pattern is contract farming whereby producers are more directly and formally tied to commodity production by industrial capital. The third involves ‘tighter forms of integration’ (427) and industrialized agriculture, where industrial capital exercises total control over the diverse aspects of the production process, as in the rubber industry of South-East Asia and the American broiler industry.

While the latter two are linked to forms of industrial capital, the first is described as a distinct form of merchant capitalism whereby commodity chains are structured almost entirely through middlemen. But, even in contract farming and vertical integration, local mercantile capital/actors may be involved depending on the context in question. Therefore, Banaji argues, the polarisation between production and exchange is a false one and signals an ahistorical theoretical formalism.

Harriss-White (1996, 2008) also asserts that merchant’s capital is almost never found in its pure form. She argues that the apparent dichotomy between production and exchange and the labelling of merchant’s capital and middlemen as ‘unproductive’ is unnecessary. For example, she shows that irrigated cotton cultivation expanded in the Coimbatore region in Tamil Nadu, India only due to a hierarchy of trading relations and credit (1996). She argues that the confusion stems from Marx’s own conflation of the abstract category of merchant’s capital with the concrete reality of commerce (2008, Appendix 2). She chooses to use the term ‘commercial capital’ in her analysis since it is the ‘actually existing counterpart of merchant’s capital’ (337).

⁵ This refers to a situation where the capitalist social relations have been established among farmers through internal processes.

This is different from Banaji's and, indeed, Marx's conceptualization of the term; while for Banaji, the difference between 'merchant's capital' and 'commercial capital' is a theoretical one, for Harriss-White it is the difference between theory and reality. I would argue that despite having critiqued Marx for conflation (of the abstract category of merchant's capital with the real world of commerce), she herself conflates the practical world of commerce with the theoretical category of commercial capital, which actually is a much more limited concept than her use of it implies. This also explains why she categorizes a whole range of agro-commercial classes as 'rural commercial capital'. This is not merely an issue of semantics but one of theoretical clarity. In this research, for the kinds of processes that are described above, the term 'mercantile' or 'merchant's capital' is used for the purposes of theoretical analysis, while agro-commercial classes or class factions is used for empirical description.

Banaji's work presents the various modalities through which merchant's capital may operate, and how this may be better integrated into Marxist analysis.⁶ This in turn raises some important questions for this research. His 2016 article was written with a focus on 'peasants', i.e. peasant households whose reproduction is subordinated to capital and that is secured by capital. But arguably a majority, if not all, of developing world farmers have now developed into a class (or classes) of capital and classes of labour and combinations thereof (petty commodity producers). In fact, it is debateable whether there are any peasant households outside capitalism at all. In the 21st century, most (possibly all) cases studying merchant's capital and farming involve dealing with the relations between classes of capital, and between capital and petty producers. Therefore, the key analytical issue between producers and merchants needs to be clearly identified as one of division of profits, and of competition between them, and not one of exploitation of non-capital by capital.

Banaji resolves this well in the case of contract farming. He argues that since there is overwhelming evidence that contract farming is usually biased towards capitalist farmers, it is better understood as 'a legal and economic relationship *between* capitals' (421, emphasis added). However, it is not clear from his work how we can

⁶ However, a general issue with this article is that it claims that all kinds of traders, brokers and middlemen have been capitalists since the 14th-15th centuries. It raises the question, beyond the scope of my research, of how we can historicize the emergence of these capitalists, and the changes in these categories over five centuries.

understand the role of mercantile or industrial capital with respect to other patterns identified by him if the producers form a class of agrarian capital. I contend that in such a context his idea of combined accumulation between different levels of merchant's capital must also be extended to capitalist farmers. In other words, in such a situation capitalist farmers have to be included to account for the full extent of accumulation within agriculture, rather than taking a 'peasant-versus-capital' view.

Another concern is that Banaji makes reference to studies that focus on a single crop or that allow for categorisation as one or another pattern of merchant capitalism. However, in India, as in many other countries, many farmers cultivate more than one crop annually on a commercial basis: presumably, this means that they are participating in different commodity markets. This makes Banaji's categorisation of different patterns of capital's domination of agriculture appear too simplistic/one-dimensional. In contemporary times, it might be more useful to understand this as a multiplicity of capital, including merchant's capital, co-existing and/or competing under the specific form of capitalism in different regions. Banaji's argument that 'industrial capitalism of the classic type cannot be seen as the sole form and structure of capital accumulation' (424) contributes to this position. However, his categorisation has to be expanded to account accurately for the very different historical moment of the 21st century.

2.2.2 *The Nature of Agricultural Markets*

Within the political economy tradition, one of the most prominent ways in which agricultural markets have been analysed is through the concept of interlinked factor markets.⁷ 'Transactions are interlinked when the contract conditions for one exchange (e.g., for labor or output) are established as conditions for access to another exchange (e.g., for land or finance)' (Crow and Murshid 1994, 1012). The debate on interlinked markets is dominated by a focus on landlord-tenancy relations rather than the trader-producer relations which is the focus of this review. Much of this literature is based in the South Asian sub-continent, and forms the basis of the discussion here.

A key figure in this debate is Bhaduri (1983) who argues that in the years following independence India was reeling under 'forced commerce' owing to the involuntary

⁷ Interlinked transactions are also widely debated in the institutional framework. However, these have been adequately critiqued from the political economy tradition (Srivastava 1989b; Harriss-White 1996) and will not be repeated here.

nature of market exchanges by peasants. Small peasants, he argued, were dependent on the market for their subsistence but unable to meet their needs through their production. This forced them to take consumption loans from merchant-moneylenders who in turn extracted surplus through interest on the loans and by manipulating prices to be as low as possible. This also led to tied transactions in other markets such as labour and land. Bhaduri is aware, however, that this is a phenomenon limited to the small peasantry and cannot be extended to the rich, large-landholding peasants.

Bharadwaj (1985) develops this last line of argument even further when she delineated the different ways in which different classes or groups of farmers may be integrated into the markets. For example, while the large cultivators set the terms of exchange in the market, the smallest have to enter oppressive debt relations for consumption needs. Therefore, Bharadwaj argues, exchange relations are firmly rooted in production conditions. Similarly, based on their work in Bangladesh, Crow and Murshid (1994) also argue that the differences in the prevalence and nature of interlinked transactions in backward and advanced agricultural areas of the country are rooted in the agrarian structure. In advanced areas, for instance, the accumulation by rich farmers severely limited the possibilities of their exploitation by merchants through such transactions.

While Bhaduri's and Bharadwaj's work is considered an important starting point in the understanding of debt relations and commercialisation of agriculture, subsequent scholarship has both critiqued their work and built on it for some significant insights. Srivastava (1989a, 1989b) points out that they limit their analyses to the exploitative role of interlinked transactions, one that holds back different factor markets from complete capitalist development. He argues that in the context of transition, the nature of the interlinked transactions is contingent on the changes in 'the strategies of subsistence or accumulation of different classes' (1989b, 499). Further, the function of such a transaction may change radically even when its outward appearance remains the same. Although argued in the context of tenancy arrangements, this is an important contribution that allows for the possibility of both progressive and regressive tendencies in the functioning of these transactions. It also compels us to look for the *content* and *context* of the transactions rather than a single-minded focus on their *form*.

Despite the strengths of Srivastava's work, his treatment of these transactions lies within the economic realm. This limitation is addressed by Hart (1986) who also argues from the point of view of labour-tying arrangements. She argues that interlinking persists across quite diverse contexts not only due to the compulsions of labour management but also those of 'social control'.⁸ In other words, sometimes elites engage in such transactions because they can open up access to wider spheres of accumulation. Hart establishes that changes in interlinked relations are rooted not only in conditions within agriculture, but also in changing political conditions and the tensions and contradictions which the institutional arrangements themselves generate (197). She illustrates this by tracing the trajectory of exclusionary sharecropping arrangements (*kedokan*) in Java. She links its uneven fate across Java from the 19th century to the 1980s to patterns of labour demand as well as the militarisation of the bureaucracy since the late 1960s and the accompanying expedition against political organising at the village level. Her explanation of the persistence of interlinking bridges the economic and the non-economic spheres and she clearly asserts that it is an integral, even necessary, part of capitalism. This allows us to expand our analysis of interlinking and understand the various functions such a relation could perform for the social groups involved in it.

There is, however, a deeper issue with looking at markets through the lens of interlinking alone. A focus on interlinking undermines the diversity of classes that constitute markets in different regions. In other words, if class relations are taken as the starting point, along with forms through which dominance over land and other capitals is exercised, interlinking would perhaps be a lesser intellectual puzzle. For instance, through her long-standing empirical work on markets in South Asia, Harriss-White (1996, 2008, 2010) argues that merchants cannot be considered to be a single class, but must be recognized as heterogeneous and internally differentiated (which we also gain a sense of from Banaji's work discussed above). Scholars such as Bhaduri and Bharadwaj, she points out, conflate all kinds of merchants and

⁸ 'Social control' refers in general to the ways in which those who control the means of production attempt to exercise power in non-labor spheres over those with little or no access to assets. These social and political relations between workers and employers are... often crucial elements in strategies to maintain and reinforce positions of economic dominance over the longer run' (Hart 1986, 190).

moneylenders into a single category (Harriss-White 1996).⁹ Nevertheless, their presence has implications for class dynamics and inequalities in any region, owing to the simple fact that a large proportion of resources and assets are found to be concentrated with them across multiple contexts. She also points to the fact that traders maintain their predominance by developing monopoly-like relations and strengthening non-capitalist social relations of production.

The latter point actually signals the part of her work where she argues that market relations and dynamics are embedded in ‘social structures of accumulation’, i.e. social institutions which regulate the economy. This is evidenced, in India, by the predominance of certain castes in certain businesses but also in the manner in which they function. Joint families, use of (usually unpaid) female family labour, marital alliances and use of caste associations are some of the ‘social’ ways in which this class perpetuates itself (Harriss-White 2003).

Like Hart, Harriss-White is not only able to combine the economic and the non-economic through such analysis, but also to place politics and the State firmly at the centre of understanding the market. She does this, firstly, by arguing that merchants have ‘infiltrated state organisations’ (1996, 336). She draws on Kalecki’s (1972) conceptualisation of an intermediate regime and extends this to argue that a large majority of India is governed by the ‘intermediate classes’, i.e. ‘a ‘loose coalition of the small-scale capitalist class, agrarian and local agribusiness elites, and local state officials’ (2003, 241). Given the fact that these different social actors and groups may not necessarily have the same interests, the usefulness of this concept must be questioned, and this is discussed in further detail in Chapter 3. Nevertheless, the larger point is compelling, i.e. at a ‘lower level of abstraction’, the boundaries between the State and society are extremely porous, the implication being that accumulation by private actors (intermediate classes) and the State are interwoven. In her empirical work on West Bengal, she has also shown that mercantile interests may also be protected by the State’s own interests. The Left government, for instance, protected the interests of the agro-commercial classes in paddy/rice at the expense of the much poorer petty trading interests because it needed to secure

⁹ Bhaduri (1983) does recognize the difference between the merchant-moneylender and landlord. However, he considers the act of moneylending itself as patently unproductive.

supplies for its Public Distribution System (PDS) requirements (Harriss-White 2008).

Throughout her large body of work on this subject, Harriss-White makes the case for understanding markets as a system, i.e., while markets are embedded in production conditions, they also have a degree of institutional autonomy that determines their functioning and that in turn can have an impact on production conditions. She writes:

...the concentration of control over commercial assets mirrors that over crop production. To this extent, *the marketing systems are embedded in the agrarian social structure*. On the other hand, the marketing systems are spatially concentrated and specialised in ways which bear no relation either to the central place hierarchy or even to current local cropping patterns. So *they also evince considerable institutional autonomy from the current agricultural economy and the spatial pattern of service provision* (1996, 86, emphasis in original).

Writing with Ali Jan, she argues that it is only when the market is understood as a system in itself that relevant questions about its relational roles, such as extraction and exploitation, can be raised (Harriss-White and Ali Jan 2012).

This overview of the debates on the role of merchant's capital and commodity markets has established some important points for our analysis. Firstly, it has shown that the characterisation of merchant's capital, or of interlinked transactions more specifically, as uniformly unproductive and exploitative is inaccurate. There are contexts where merchant's capital can play a productive role through commodity exchanges and credit relations, and recognition of this requires careful empirical investigation. It is most certainly not a phenomenon limited to pre-capitalist phases. Secondly, the class/social position of farmers and traders is pivotal to understanding their relations and the transactions between them. These will vary in different contexts, including in relation to different commodities (discussed below). Finally, it has established that markets have an internal systemic logic, which however, draws on local social structures and political conditions.

2.2.3 *Corporate Capital in Agriculture*

So far I have treated the issues as if they take place within a closed national economy, without considering global aspects. However, as noted in Chapter 1, the liberalisation of the Indian economy and its impact on Indian agriculture are key issues for this research. Within this, corporate control of agriculture is a major trope.

Nagaraj (2015) argues that a majority of the listed corporate firms in India are unproductive or fake, but case material indicates significant corporate presence in Indian agriculture under liberalisation (S. Singh 2006; Pritchard and Connell 2011; Narayanan 2012; Kumar 2016). Specific details about India's liberalisation are discussed in Chapter 3 but here I examine how the impact of agricultural transnational corporations (henceforth TNCs) on producers in developing countries has been studied in wider literature. These corporates are often argued to control agricultural production and to exploit farmers through their control of upstream and downstream markets, a narrative that resonates with that on merchants in general.

Weis (2007) has argued that TNCs are the dominant actors in the global food economy. They establish their dominance through mutual trade agreements, represented best by the World Trade Organization's (WTO) Agreement on Agriculture (AoA), and through alliances with trading countries and elites in developing countries. National frames of reference, therefore, are useful only to understand global production imbalances and not to understand the global food economy as a whole. Developing countries are disadvantaged due to manipulation by developed countries where these TNCs are predominantly located; this includes, for instance, exempting agricultural subsidies by the latter and labelling those extended by the former as 'trade-distorting', imposing protectionist tariffs on agricultural imports from developing countries and so on. In this way, Weis argues, entire 'cultures of farming' of developing countries have been destroyed and farmers are treated 'as recipients (i.e. customers) rather than participants in the process of innovation' (29).

McMichael (2005, 2014) employs a food regime analysis to make similar arguments.¹⁰ He contends that the period since the 1980s can be characterized as a 'corporate food regime', a vehicle for accumulation by dispossession of peasantries across the globe. Like Weis, McMichael also views corporate dominance as representing a threat to the 'cultural survival' (2005, 278) of peasant populations. He also recognizes the WTO's AoA as a key mechanism of the subjugation of the latter. The best response to what McMichael sees as the privatisation of food security as a global, corporate relation is the food sovereignty movement. Friedmann (1993)

¹⁰ A food regime is 'a rule-governed structure of production and consumption of food on a world scale' (Friedmann 1993, 30-31).

agrees that the dominance of a corporate agenda in the global agro-food domain has been one of the key hallmarks of this period. Elsewhere she argues that corporate consolidation has put peasantries everywhere on the back foot (2006).

J.D. van der Ploeg (2009) terms this corporate-led farming regime an ‘imperial food regime’ that engulfs all local, self-governing peasant systems where both consumers and domestic producers are subjected to the coercive structures of the ‘market’. Farms and factories are, according to him, mere appendages of this agricultural ‘Empire’. As a response to the ordering imposed by the Empire, the peasantry, although not including the entire farming population, is being reconstituted into a category that seeks to disengage from large commodity markets. Araghi (2009) terms this as ‘enclosure food regime’ in the period of postcolonial neoliberal globalism. He sees it as ‘a direct continuation of the liberal imperialism witnessed during the nineteenth century’, arguing that this period is marked by dispossession and displacement of peasantries across the globe while peasant differentiation can only be understood on a global scale rather than at a national level (Akram-Lodhi and Kay 2010, 267).

There are many parallels in the works of the above authors. They provide a useful overview of the global conditions framing agriculture, and many of them refer to ecological limits to industrialized agriculture as a key feature of the post-1980 world. However, they also all eschew class analysis in favour of a populist position. Lerche (2013) argues that these authors represent a poststructuralist position whereby all classes of farmers have their enemy in corporate entities. Bernstein (2014, 1057), while sympathetic to the political project, critiques the food sovereignty position for disregarding ‘crucial elements of agrarian political economy’. He argues that in identifying ‘peasants’ and ‘peasant community’ as ‘capital’s other’, the movement neglects socio-economic analysis of peasants in different locations and historical contexts. This neglect, he argues, should also be seen as posing a problem for the movement as it brings to the fore issues of social alliances and conflicts.

I would add that the arguments discussed above do not leave any space for alternative forms of engagement by peasants (and different classes of peasants) with corporate capital. Peasants are constructed as reeling under constant oppression without ever negotiating with corporate entities, and represented as devoid of agency

except when they are in rebellion. Although van der Ploeg (2009) mentions a multitude of responses of the peasantry, this is inadequate since his understanding of the class does not include the entire farming population and is essentialized as averse to certain forms of marketing. Jansen (2015), for example, has argued that there are limits to the argument about the agro-ecological benefits of small-scale farming and presents evidence that smallholders aspire to more integration with larger commodity networks. Moreover, since these scholars attribute a diminished significance to the national and the local in understanding agrarian dynamics, they are also unable to explain how global capitalist processes interact with local political economies, and the variegated capitalisms and neoliberalisms that this generates. Weis does mention that elites in developing countries benefit from such globalisation but we find out little about who these elites are or the ways in which their interests might be aligned with those of TNCs.

Studies on farmers and corporate agribusinesses that are based in specific countries and contexts variously signal the exploitation of farmers (Kirsten and Sartorius 2002; Murray 2006), the differentiated impact on different classes of farmers (Konings 1998; Oya 2012) and the diverse ways in which agribusinesses might increase their control over the production process (Murray 2006; Gebreeyesus and Sonobe 2012). However, given such divergent analyses of concrete cases, it is Oya's (2007) argument in the case of rural accumulation in Senegal that is most useful. He has cautioned against ascribing an all-important role to agribusiness in agrarian capitalist accumulation. In tracing the individual trajectories of some rural capitalists, he points to the variety of ways in which rural capitalists have found 'new spaces of accumulation' (488) by responding to the historically determined opportunities and constraints in the sphere of the economy but also in terms of 'class, lineage-kinship and generational relations' (459). This approach allows us to view corporates as yet another, albeit usually relatively more powerful, actor in the agrarian landscape.

Akram-Lodhi and Kay (2010) argue that neoliberal globalisation has divided agriculture globally into two sub-sectors – 'export-oriented capitalist' and 'petty commodity producing' – and that agro-food transnational capital plays an important role in capital accumulation and agrarian change in the former. Despite the problems with claiming that export-orientation and petty production are mutually exclusive, it

is notable that they accept that transnational capital could play a positive role in terms of accumulation.

A final question arises about whether corporate capital can be considered merchant's capital. The existing literature on corporates does not engage with this issue explicitly and it is a question that can be resolved only through the empirical analysis of their role.

2.2.4 Agricultural Commodities

The final part of this section concerns commodities. Studies on agricultural markets have to necessarily be focused on certain commodities, in this case, crops. In an ethnographic study of food grain markets in Madhya Pradesh, Krishnamurthy (2011) focused on wheat and soybeans. Similarly, Harriss-White's (2008, 2010) work on markets in Tamil Nadu and West Bengal has a significant focus on rice, although her work on Tamil Nadu (1996) also covers other crops such as cotton, tobacco and groundnuts. Studies on markets in Bangladesh have also focused on rice (Crow 1989; Crow and Murshid 1994).

The focus on particular commodities in the study of markets is both inevitable and useful. Some commodities are so critical to certain economies and processes that studying them can give insights in a way that other commodities cannot. At the same time, it is necessary to consider whether the commodity has an inherent characteristic that shapes the social phenomena in question. The stories told through staple and non-staple crops, or subsistence and cash crops are bound to be different. For example, Krishnamurthy's (2012) focus on wheat and Harriss-White's (2008) on paddy/rice, both staples that are widely cultivated, allows them to analyse the State's role in procurement and distribution of food, as well as its political priorities. On the other hand, crops meant for export (e.g. rubber) or those that have been introduced on a large scale by colonial powers (tea or sugar) can be more indicative of international processes impacting on agriculture. Further, studies on GM crops can be telling of the ways in which biotechnology and TNCs are changing the contours of domestic agriculture.

The physicality of crops, i.e. their agronomic features, also plays a part in determining their social relations of production and exchange. For example, the specific irrigation requirements of high-yielding varieties (HYV) of wheat and paddy

are crucial to understanding the kind of labour dynamics that are generated (Byres 1981). Similarly, the perishability of sugarcane and the need for capacity utilization of sugar mills has been cited as one of the factors leading to the creation of sugarcane cooperatives in western India (Damodaran 2008). Outside the sub-continent, Selwyn (2007) has argued that the tight production schedule of grapes, a key Brazilian agro-export, and the increased demands of buyers have given labour an advantage in its relation with capital and allowed workers to negotiate concessions from export firms.¹¹

Such studies, focused on one or two crops, are usually rich in either or both qualitative and quantitative aspects of their production and exchange. Yet, from the point of view of studying accumulation by capitalist farmers, they have a major shortcoming. There is an insufficient understanding of other crops the farmers grow and which impact on their accumulation. This is especially important as the annual cropping cycle involves more than one type of crop in all agrarian regions of India. A study of multiple crops can help in understanding their composite effect on accumulation and the kind of trade-offs farmers make and why. As Harriss-White (1996, 36) has argued, 'To draw conclusions about market involvement from one market alone would be inaccurate and would also miss the point of their interdependence'. Olsen's (1996) study on two villages in Andhra Pradesh in India and two crops (paddy and groundnut) exemplifies this. She argues that there were no distress sales in paddy by petty producers to merchants and capitalist farmer-landlords because each group could hedge their risks against and benefit, unevenly, from the groundnut market.

This chapter has outlined the main theoretical debates that this research engages with and argued that an analysis of capitalist agriculture in the 21st century requires a study of processes that lie beyond the farm. The role of agricultural merchants and markets is especially relevant in this context and has been intensely debated within the political economy tradition. Corporates are understood to lie within the realm of the markets, but it is argued that the way farmers engage with them is under-

¹¹ Beyond studies on agricultural commodity markets, there are a range of crop-specific studies that focus on acreage, production levels, profitability, intensity and cropping patterns (Thomas 2011; Surjit 2011; Rawal 2013; Nagaraj et al 2013) with the objective to analyze changes in farming practices and successes and failures therein.

theorized. A longer conclusion links these issues to specific empirical developments within India and Punjab at the end of Chapter 4.

Chapter 3. Indian Agriculture: An Empirical Survey

In this chapter, I use the theoretical framework identified thus far to analyse the literature and debates on developments in Indian agriculture. Some of the main questions that this chapter asks are: What do the patterns of landholdings, and the changes therein, indicate about class relations in the countryside? What are the patterns of economic diversification among farmers of different castes, classes and regions? This chapter also examines in detail issues of economic liberalisation that impact agriculture per se. I discuss relevant reforms that affect both the process of production and the marketing of agricultural commodities. The final section questions the narrative of an overall agrarian crisis in India.

3.1 Landholding Patterns

In 2012-13, agriculture contributed 13.68% to India's Gross Domestic Product (GDP), considerably less than industry (27.03%) or services (59.29%) (Niti Aayog/Planning Commission 2015). Government data around the same time also shows that 48% of the country's working population is dependent on agriculture (National Sample Survey Office (NSSO) 2014a). While the share of the labour force in agriculture has been declining (Reddy and Mishra 2009), the figures show that agriculture supports a disproportionately large part of the working population.

Needless to say, in a country as large and diverse as India, there are many regional variations in this trend. Moreover, the 70th round of the NSSO survey shows that a large part of farming households' income is now derived from non-agricultural sources (Rukmini 2014) (see Section 3.3.2). Nevertheless, the countrywide reality of agriculture being a major, if not the main, source of livelihood for most of the rural population cannot be denied. At the same time, this study, based as it is within the framework of agrarian political economy, recognizes that the agricultural population can be disaggregated into different classes and social groups.

One of the key ways in which the agricultural population is disaggregated is by landholdings. The Government of India divides landholding households into five size categories: marginal (less than 1 ha.), small (1-2 ha.), semi-medium (2-4 ha.), medium (4-10 ha.) and large (over 10 ha.). However, this classification criterion

raises its own problems. Firstly, the quality of land across India is so varied that uniform size holdings are not equally comparable. For example, government surveys on soil and land use show that soil quality differs drastically based on whether the terrain is characterized as an alluvial plain, valley plain, hillside slope and so on (SLUSI 2016). Moreover, the infrastructure available to develop the land is also extremely varied. In 2010-11, the proportion of irrigated area to net sown area was 45.7%, but this figure fluctuated according to size of landholding, source of irrigation and region (Agriculture Census Division 2015): for example, it is around 26% in Odisha and Chhattisgarh, 38% in AP, 47% in Bihar, 90% in Haryana and almost 100% in Punjab.¹²

A second important concern relates to the quality of data. Deepak Kumar (2016) argues that historically, different regions have had different qualities of land record-keeping. Moreover, land records under-represent tenancies since most tenancy contracts are ‘unregistered oral contracts’ (42). Furthermore, *benami* holdings (property held in another person’s name, usually a family member or even a fictitious person) are frequently used in order to avoid legal ceilings on land ownership and, by their nature, these are unaccounted for in government data (see also Section 3.2).

Beyond issues of the data itself, there exists the analytical question raised in Chapter 2 that the size of landholdings may not be representative of either scale or class position. This may be because, under capitalist development, land-improvement technologies are expected to make size irrelevant in terms of productivity. Some scholars have also argued that land size and productivity are inversely related due to the efficiency of the household’s family labour (Griffin et al. 2002). Narain (1988) also made a case for the inverse relationship in agriculture in India based on survey data from 1950-51. This was disputed by Patnaik (1999) citing differences in method and data used and she argued that there was no necessary or static correlation between land size and productivity.

However, recent data shows that land size may still matter in understanding class positions. Chapter 2 mentioned that Rakshit (2011) has found that land size and class

¹² These proportions are calculations based on figures in Table 5(A) (Agriculture Census Division 2015, 299-300).

positions overlapped in advanced capitalist regions of West Bengal. On the basis of data from the 70th round of NSSO survey, Ranganathan (2013) found that the total value per hectare and total returns per hectare are higher for larger landowners. The proportion of agricultural income to total income also increased consistently with increase in land ownership, from 1% for the smallest landowners to 86% for the largest.¹³ This leads him to suggest that the inverse relationship may no longer hold in the Indian context either ‘because of increased efficiency of operations in large farms or decreased efficiency of operations in small farms’ (50). Therefore, given that Indian agriculture is mostly capitalist, land size may be used as a rough indicator of the agrarian position of rural classes. At the same time, for all the reasons discussed earlier, we must bear in mind that these are only tendencies in those regions whose agriculture is sufficiently capitalized that can be used to further our analysis.

With these caveats in mind, Table 3.1 gives the proportion of different landholding categories based on the Agriculture Census 2010-11. It shows that well over 80% of landholdings were either small or marginal in 2010-11 and this proportion has increased over the last several years. At the same time, large landholdings constituted less than 1% and have been in steady decline. Not surprisingly, incomes also varied according to landholding. According to NSSO data, the total income of large landholding households was twice as much as medium households and eight times as much as marginal ones in 2013 (Ranganathan 2013). Kannan (2015) has argued that declining farm incomes would matter less to rich farmers since they are known to have diversified into other businesses. These data raise questions about the viability of small landholdings and the nature of agrarian change underway in the country, issues discussed in following sections.

¹³ Ranganathan (2013) further divides the marginal size class into three sub-categories: less than 0.01 ha, 0.01-0.04 ha, and 0.41-1.00 ha. The largest landowning class includes households owning over 10 ha.

Table 3.1: Percentage of different landholding categories in India

	1995-96	2000-01	2005-06	2010-11
Marginal (less than 1 ha.)	61.58	62.88	64.77	67.1
Small (1-2 ha.)	18.73	18.92	18.52	17.91
Semi-medium (2-4 ha.)	12.34	11.69	10.93	10.04
Medium (4-10 ha.)	6.14	5.48	4.93	4.25
Large (above 10 ha.)	1.22	1.03	0.85	0.7

Source: Agriculture Census Division, various years

It should also be noted that the distribution of these landholdings varies considerably across different regions of the country. For example, the proportion of marginal holdings varies from 4.29% in Nagaland to 96% in Kerala. Similarly, large holdings vary from 0.01% in West Bengal to about 6% in Punjab and Rajasthan and 14% in Nagaland (Government of Punjab 2014). Again, variations in income abound. The average monthly income per agricultural household in 2012-13 was estimated as Rs 3558 in Bihar, Rs 7926 in Gujarat and Rs 18,059 in Punjab (Directorate of Economics and Statistics 2015). Add to this that these figures are non-comparable across regions due to the different constraints within which production is done, these aggregate all-India figures are, therefore, merely indicative of broad land ownership patterns; any detailed assessment of agrarian change would require close attention to specific regions and cases.

Overall, however, the question that arises here is how did we reach this situation historically, and what are the social, economic and political processes that lie behind these numbers. We turn our attention now to these questions.

3.2 A Historical Review

When the British annexed the erstwhile Bengal Province in the second half of the 18th century, they embarked on an effort to create ‘progressive’ capitalist farmers with the aim of maximizing land revenue. They introduced ‘Permanent Settlement’ in 1793 whereby landlords were given permanent and hereditary rights in exchange for a fixed sum of money to be paid annually to the British administration. However, instead of creating an enterprising class of farmers, the system gave rise to a class of absentee landlords that leased their land to multiple sub-feudal lords and tenants (Guha 1963; Chaudhari 1975).

In other parts of the country, different land settlements were introduced such as *ryotwari* and *mahalwari*. In the former, revenue assessment was by individual cultivator, in the latter by identified estates. While in principle these two settlements were better suited to the interests of the cultivators, in practice they often involved over-assessment of revenue and led to peasants' increased indebtedness. Moreover, the position of the existing or new landlords, as the case may be, was often strengthened (Bandopadhyay 2004). Therefore, the reasons for the halting of miniaturisation of landholdings in different regions are likely to be different. The diversity of land settlement patterns across India is argued variously as reflecting the colonial government's desire to avoid the drawbacks of Permanent Settlement, or the pre-existing agrarian structure in these areas, or reactions to policies from below (ibid.; Stokes 1978; Bhattacharya 1992).

Apart from the sheer size of India, this diverse agrarian history is one of the key reasons for the regional disparities in the nature of agrarian capitalism.¹⁴ Overall, however, it is widely agreed that well over a century of colonial rule left the countryside with a powerful and parasitical class of landlords, and widespread tenancies and indebtedness among the landless and cultivators. Owing to the mass mobilisation of agricultural workers and peasants in the period leading up to Independence and the prevailing ideas of modernisation, the independent Government of India recognized landlordism as both a political problem and a key obstacle to agricultural development.

Land is a state subject under the Indian Constitution and in the 1950s all state governments passed legislation addressing redistributive land reforms, including ceilings on landholdings, consolidation of holdings and improvement in terms of tenancy. The reforms failed in terms of redistribution to tenants and labourers, although they did largely abolish absentee landlordism, despite many landlords retaining control over land through benami transactions (Sukumar Das 2000). The rich and middle peasantry, on the other hand, benefitted from the reforms and consolidated themselves as a class of 'proto-capitalists' (Byres 1988). This was not an unintended consequence but was built into the reforms as a result of their class

¹⁴ For example, while until recently, the erstwhile Bengal Province (Bihar, Jharkhand, Odisha and West Bengal) had large landlords, tenancy, agricultural stagnation and high levels of poverty (A.N. Sharma and Rodgers 2015; Basu 2015), ryotwari areas like Punjab, Haryana and western UP were among the earliest Green Revolution successes (Stokes 1978; Byres 1981).

struggle (ibid.) and because Congress considered them to be a bulwark against political instability (Hasan 1989).

Consequently, despite land reforms, land ownership has remained extremely skewed across the country. According to the Agriculture Census 2010-11, medium and large landholdings constituted less than 5% of all landholdings but covered more than 30% of the total area (admittedly, as the share of large and medium holdings declines, the share of land covered by them also declines). But this data does not adequately account for different kinds of tenancy arrangements (Mearns 1999; D. Kumar 2016). The land reforms, however, did allow some transfer of land to a section of rich peasants in some areas, who, over time, emerged as a class of capitalist farmers.

Owing to the commercialization of agriculture under colonial rule, farming in the Indian sub-continent had already transformed to agriculture (*à la* Bernstein) by the time of Independence. In the early post-Independence years the government was faced with the mammoth challenge of feeding the country's over 350 million people. Production initially increased through expansion of the area under cultivation (Nath 1969; Narain 1977), but by end of the 1950s agricultural growth rates had slowed and this became a serious concern for the food requirements of the population and overall economic development.¹⁵ By the early 1960s, large quantities of food were being imported from the USA under its PL-480 food aid programme.

The government launched the Intensive Agricultural Development Programme (IADP) from 1961 to 1963 across 15 districts. Following its success, the Intensive Agricultural Area Programme (IAAP) was launched in 1965 to cover 114 districts (Frankel 1971; Aggarwal 1973). It is the IAAP which lies at the core of what is understood as the Green Revolution. It was a programme to increase food production, with the aim of achieving national food self-sufficiency by introducing HYV seeds, necessary crop chemicals and controlled irrigation facilities. With support from the central government, some states (e.g. Punjab, Haryana, AP and Tamil Nadu) were better able to develop rural infrastructure, credit facilities and extension services that supported this new mode of agricultural production.

¹⁵ Frankel (1971) has argued that in the early post-Independence years, land reform was preferred over agricultural intensification to increase agricultural productivity. However, this policy was revised due to the failure of the reforms.

The HYV varieties of wheat and paddy, the two crops promoted under the IAAP, required a whole range of biochemical (seeds and crop chemicals) and mechanical inputs (tube wells for irrigation, tractors and threshers) to achieve the potential yields. This immediately placed regions that had limited irrigation facilities and farmers with fewer resources to invest in agriculture at a disadvantage. It has been argued that the Green Revolution was guided by a 'betting on the strong' policy whereby areas where the rich peasant class was dominant were given a preference (Frankel 1971; Byres 1981). Byres (1981) has also argued that, contrary to some economists' opinions, biochemical inputs alone are not scale neutral and it was a combination of controlled irrigation, HYV seeds and crop chemicals that proved the most profitable.

In a kind of 'capitalism from below' (Byres 1986, 1988), the Green Revolution created a class of capitalist farmers who engaged in heavily capitalized farming on their own lands for profit. Such capitalization was easier for farmers with larger landholdings than those with small and marginal holdings, and many among the latter ended up landless. So, on one hand, the Green Revolution made the country food self-sufficient, while on the other, it increased class differentiation in the countryside.

Another related aspect of the Green Revolution was the reformation of the marketing system that ensured that farmers received a remunerative price for their produce. Building on the efforts towards public food procurement for redistribution initiated in the aftermath of the Bengal Famine, the Food Corporation of India (FCI) was set up in the mid-1960s with the purpose of procuring food grains, mainly wheat and paddy, from grain surplus areas to redistribute to grain deficit ones through the PDS.¹⁶ Alongside, an entire marketing infrastructure inclusive of wholesale markets or *mandis* and state-level procurement agencies was created. Perhaps most importantly, this was complemented by a remunerative Minimum Support Price (MSP) for both wheat and paddy, although it was not effectively administered everywhere (FCI 2015).

¹⁶ The FCI also procured food grains through partial intervention in the markets in the form of 'levy' (e.g. B. Harriss 1977).

Mooij (1998) argued that the objective of ensuring a fair price for farmers was only integrated into the country's redistributive food policy in the mid-1960s. However, over the years, the system has been more beneficial for the farmers in a few states who benefit from the high MSP on wheat and paddy than for the country's large swathes of food-insecure people. The State's policy on price support for farmers has been especially significant for Punjab (see Chapter 4). The government also introduced a model agricultural market regulation law in the early 1960s, but it took many years for most states to adopt it (Acharya 2015).

3.3 Recent Trends

Over the past few decades, there have been important developments in Indian agriculture with respect to land dynamics and patterns of accumulation that warrant closer scrutiny.

3.3.1 Land Dynamics

Several scholars have pointed out that there have been important changes in contractual relations in land in the past few decades. Using NSSO data, it has been argued that since the 1980s, the area under tenancy has increased while the number of tenant holdings has declined (Srivastava 2000; Ramakumar 2000).¹⁷ The share of land leased-out by marginal and small landowning households increased from 32.44% in 1991-92 to 47.73% in 2002-03 (H.R. Sharma 2010). According to the 70th round of NSSO survey, the increase in the cost of land-leasing was especially marked for the medium and large landholding households across both the *rabi* (winter/spring) and *kharif* (summer/monsoon) seasons. Moreover, the proportion of medium households leasing-in land increased from 12.99% in 2002-03 to 25.01% in 2012-13; for large households, the increase was from 14.49% to 28.36%. These increases were much larger than those in smaller landholding households (Ranganathan 2013).¹⁸

These facts are indicative of a growth in 'reverse tenancy'. Reverse tenancy is the phenomenon whereby small farmers lease their land out to larger farmers. Again, there are wide regional variations in this trend. The north-western states of Punjab

¹⁷ It has also been argued that tenancy is widely under-reported since tenancy legislations in most states are quite restrictive, and most tenancy on the ground is actually illegal.

¹⁸ The same report also notes that the returns to investments on leased-in land are 30-35% lower than for households that do not lease-in any land – primarily due to the lease rent.

and Haryana are argued to represent these trends more strongly than others (Srivastava 1989a; Ramakumar 2000). Nevertheless, that there is a strong tendency towards this indicates that not only are small and marginal farmers being pushed out of agriculture, but medium or large landowning households are finding it worthwhile to expand their operational holdings.

Alongside the trend towards reverse tenancy, the traditional form of land-leasing, 'big lessor, small lessee' (Srivastava 1989a, 352) continues to be prevalent. In other words, it continues to be the case that landless, small and marginal households rely on forms of tenancy for their subsistence. In 2002-03, the percentage share of leased-in land by such households was as high as 71% of the total (H.R. Sharma 2010). Another observation from the NSSO data is that entirely owned self-cultivated holdings have been steadily increasing since the 1970s (*ibid.*). This is an aspect scarcely analysed, and could be indicative (at least in part) of either the limited availability of profitable opportunities outside agriculture or the possibility of earning a decent return from agriculture (dependent on landholding size and crops grown).

For our purpose, it should be noted that these trends represent different patterns of accumulation by capitalist landlords/farmers across India. In fact, a debate on landlordism took place based precisely on the above trends and data. Vijay argued that between 1991-92 and 2002-03, there was a decline in cultivating households, stagnation in agricultural labouring households and an increase in non-cultivating peasant households (NCPH). The NCPH, he argued, represent 'new landlords' who are accumulating by becoming suppliers of land in the land-lease market and transferring their agricultural surplus to the non-agricultural sector (Vijay 2012). This position has been criticized for neglecting the land size class differentiation within the NCPH and instead it has been argued that the rise of NCPH represents a squeezing out of marginal sectors (B. Reddy and Shaw 2012). This debate suggests that there is a dynamic labour and land-lease market through which large and medium farmers might be profiting, and careful contextual analysis is required to understand the processes underlying them.

3.3.2 *Economic Diversification*

Another trend with respect to agrarian accumulation that raises many important issues for this research is that of diversification of investment by capitalist farmers. Admittedly, non-farm income is the principal source of income for only 4.7% of all farm households and, at a countrywide level, income from non-farm businesses has fallen by approximately 2% and average returns to investment are very low (Ranganathan 2013). Ranganathan, therefore, argues that investment in non-farm businesses happens largely as a last resort and not because it is more remunerative. However, this is a contention not always borne out by more context-specific, qualitative case studies as we will see below.

In any case, it is commonly accepted that 'pluriactivity' or 'straddling' is now a widespread practice across all farm households, including among capitalist farmers; in other words, capitalist farming is now as much about surpluses from within agriculture as from outside it. Harriss-White and Janakarajan (1997) argue that 'diversification (within and outside agriculture) is a close associate of contemporary agrarian differentiation' (1476) and acts as a security for the most well-resourced farmers. The changing character of capitalist farmers and rural India more generally is also reflected in the gradually expanding literature on the rural-urban continuum (Jodhka 2014b; Gupta 2015; Harriss-White 2016a). An understanding of diversification among the dominant agrarian classes is important because even though in India, and especially in Punjab, agriculture may be imagined to be the dominant way of life, it is neither the reality nor aspiration (Jodhka 2006).

Several case studies indicate that as large capitalist farmers reached the limits of investments in agriculture, many diversified into agro-commercial and agro-industrial businesses.¹⁹ This has been evidenced since the 1980s in states such as Tamil Nadu, AP, Karnataka, Gujarat, Maharashtra and Punjab (Rutten 1995; Damodaran 2008; Harriss-White 2010; Lerche 2014), although some agrarian castes have been diversifying into non-farm businesses since the early 20th century (Damodaran 2008). However, in the 21st century, some kind of diversification has

¹⁹ A somewhat parallel argument in the labour market came from Vaidyanathan (1986) who argues that the non-agricultural sector employs surplus labour from agriculture to some extent. There are several other studies that reflect on diversification in rural India based on occupational and social mobility, focusing on marginalized socio-economic sections more than the elite (Djurfelt et al. 2008; A.B. Reddy and Swaminathan 2014). Nevertheless, it should be noted that they assert better chances of mobility by large farmers and landlords.

become common across agrarian groups everywhere. Lerche (2014) has argued that large capitalist farmers across India have been expanding accumulation outside agriculture through transfer of surplus to trading (and occasionally industry), investments in education to obtain government jobs, lucrative outmigration and political influence.

In the post-Green Revolution period, the wealthy landowners in coastal AP, especially those belonging to the *Kamma* caste, invested in trading of agricultural commodities, distributorships of fertilizers, seeds and other crop chemicals, transport firms, cotton ginning and sugar milling. In fact, it has been argued that a new business community comprising the rural elite was formed in the region in the 1980s (Upadhyaya 1988a, 1988b). Similarly, large capitalist farmers in Gujarat invested in the tobacco trade, potato trading, cold stores and a handful of construction related industries, i.e. cement, pipe and tile (Rutten 1995). Heyer (2016) has argued that *Gounder* caste agriculturists in the Coimbatore region of Tamil Nadu started diversifying into petty trade in the 1980s. By the turn of the 21st century, rural industrialization in the area allowed them to further diversify and consolidate in various kinds of trading and industrial activity (see also Chari 2000). These investments were financed through agricultural surpluses and sale of land. Harriss-White (2010, 2016) argues that the dominant agrarian caste in Arni in Tamil Nadu started investing in trade following the rich dividends that it reaped through the Green Revolution, and even came to dominate agro-commerce. By the 1990s, however, agriculture's importance as a source of capital for trading and industrial ventures was declining.

With respect to political influence, Jeffrey (2003) argues that the large *Jat* (henceforth Jat) farmers of western UP continue to reproduce and expand their power through links with the local police and infiltration into local government bodies through bribery. Pattenden (2011) argues that fiscal decentralization has opened up opportunities for large, wealthy farmers in rural Karnataka to accumulate and continue their domination over less well-off members of the dominant class and the labouring class through 'gatekeeping'. This is done both through earning a fee for arranging different kinds of public works and through exercising personal influence on the distribution of public resources. Martin (2015) makes a similar argument for rural Punjab whereby the dominant Jat farmers are able to exercise

control over Scheduled Castes (SC) or *Dalits* and expand the basis for their accumulation by controlling political institutions and public resources.

A common feature across all these cases, and across small and large landowners, is the investment of surplus into the education of their sons and daughters. While education of sons is done with the aim of creating new sources of income, those of daughters is often done with the aim of finding a suitable match and sometimes one that furthers the economic prospects of the family (Jeffrey et al. 2008; Heyer 2016). This is indicative of aspirations of socio-economic mobility where agriculture alone is deemed to have limited potential. However, the gap between education and a realization of such mobility can be quite marked and conditioned by the socio-economic background of the students. Ghuman et al. (2006) have argued that the poor quality of public higher education in Punjab and its continuing privatisation (leading to higher costs) reduces access to educational opportunities for students belonging to weaker social groups.

When combined with substantial capital and access to social networks, however, education can reap rich dividends. Rich Jat farmers in UP are able to arrange lucrative jobs or migration opportunities for their urban-educated sons (Jeffery 2003; Jeffrey et al. 2008; Lerche 2014). Some may even stay unemployed well into their 30s and negotiate 'educated un/under employment' through continued investment in education (Jeffrey et al. 2008).²⁰ Sons of smaller Gounder farmers in Tamil Nadu, on the other hand, are under pressure to take up low-level administrative or engineering jobs, not least in order to cover the expenses incurred for their education (Heyer 2016).

Education, and subsequently jobs or businesses based in urban areas, also cause out-village migration. The way these migrants relate to land in the village is contingent on many factors. The literature indicates that it is common for households that diversify, including those who migrate, to invest in or maintain ties with the land. Upadhyya (1988a) suggests that diversification may be undertaken as 'a protection against the risks of pure cultivation' (1376). In such situations, the likelihood that profits earned from other businesses would be re-invested in agriculture is much

²⁰ In the event that they failed to gain employment despite education, they would still strive to maintain an educated cultural lifestyle which is considered a mark of progression. Sometimes these young men would cultivate a disconsolate, 'time-pass' culture (Jeffrey et al. 2008; Jeffrey 2010).

greater. In Gujarat, the entry of capitalist farmers into the potato trade and storage business was prompted by the shift in the cropping pattern from tobacco to potatoes as the main cash crop; this provided them with better access to information on production innovations, thereby allowing them to make higher profits through potato production (Rutten 1995).

However, even when migrants are not re-investing in the expansion of landholdings or in agriculture, they may still choose to maintain their landholding in the village. To this end, they could either lease it to or leave it in the custodianship of a family member or other trusted person in the village (Upadhyya 1988b; Rutten 1995; Harriss-White et al. 2009). Djurfelt et al. (2008) suggest that in Tamil Nadu diversification has been a result of households trying to avoid the fragmentation of landholdings between multiple sons and settling all but one son in other occupations. At the same time, sale of land could also be the source of capital for investing in other businesses or occupations (Upadhyya 1988b; Heyer 2016).²¹ Thus, land dynamics within agriculture and within a village are closely linked to the strategies of those who are leaving it.

Upadhyya (1988a) makes an important point in this context; she argues that one should be careful about assuming a linear relationship between agricultural surplus and investment in non-agricultural businesses. While she accepts that large cultivators accumulated significant capital to invest in non-farm businesses, she also points out that:

In several cases, rural traders and businessmen purchased land with business profits; in others, small farmers were able to increase their landholdings only after making money in business. Even for the richest families in each village, the initial leap in prosperity came not from agriculture but from business... These cases seem to disprove the hypothesis that economic diversification is an outcome of the increased profitability of agriculture (i.e. the surplus that large owners have accumulated seeks an outlet in non-agricultural business enterprises). (ibid., 1380-1381)

It should also be noted that attempts at diversification may fail, resulting in households incurring large debts (Heyer 2016). At the same time, small landowners may diversify because of their inability to earn adequate returns from agriculture. In

²¹ Sale of land has also been argued to have benefitted some small landholders (Lerche 2014; Heyer 2016).

light of the above evidence, attempts at diversification also need to be analysed in relation to many other factors that determine their success or failure and impacts on households and the region's development trajectory. From the point of view of the agrarian question debate discussed in Section 2.1, Lerche (2013) has argued that the agrarian transition in India has been bypassed, i.e. agrarian capitalists are accumulating both within and outside agriculture, but not in a way that is supporting industrialisation.²²

Finally, caste and community networks are crucial to the patterns of agrarian accumulation by farmers. Damodaran (2008), for example, combines the nature of caste relations with the political economy conditions in different regions to describe the emergence of various dominant business communities. Apart from the traditional trading groups who have transformed into successful industrial capitalists, he also discusses business communities who have successfully built a diverse economic profile on the back of rich agrarian surpluses, such as the *Kammas* of AP, *Gounders* of Tamil Nadu, *Patidars* of Gujarat and *Marathas* of Maharashtra. Damodaran argues that caste and kinship networks are especially important in establishing and expanding businesses since they aid in mobilizing capital and contacts, both crucial for business, and reduce the possibility of breach of contracts.²³ He goes on to argue that large businessmen transacting with those outside of the community is not a sign of the absence of community support but rather of a strong business-minded community that is able to produce such entrepreneurs.

At the same time, it is not just the internal dynamics of a caste but how it is placed in relation to other castes in the region that matters to the development of its business profile. So, while in Tamil Nadu dominant agricultural castes have been able to create a space in certain trades and industries, in states like Punjab they have not been able to do so due to the power and near-monopoly of the trading castes (Damodaran 2008; Lerche 2014).

²² In his seminal study, Chandrasekhar (1993) also cautions against perceiving occupational mobility as a sign of agricultural dynamism.

²³ A similar role is played by ethnicity in regions such as Arunachal Pradesh (Harriss-White et al. 2009; Mishra 2015).

The foregoing discussion shows that capitalist farmers have individual strategies for accumulation, but they may also accumulate through collective strategies, especially when leveraging their caste-community networks.

3.3.3 *A Composite Rural Capitalist Class?*

Some authors argue that capitalist farmers develop interests that combine with those of small-scale industrialists to constitute a composite rural elite. This is a line of argument that needs to be closely investigated since the relations between capitalist farmers and traders are a core element of this research.

As mentioned earlier, Harriss-White (2003, 241)²⁴ argues that a ‘loose coalition of the small-scale capitalist class, agrarian and local agribusiness elites, and local state officials’ constitute ‘intermediate classes’ in the Indian social formation.²⁵ She argues that pre-liberalisation India was an intermediate regime that was driven by, and worked in, the interests of these intermediate classes; certain kinds of macro-economic conditions, especially the economic stagnation in the 1980s, benefitted the intermediate classes. Similarly, Rutten (1995) argues that large farmer-traders in Gujarat have merged with small-scale industrialists to form a class of ‘rural capitalist entrepreneurs’. He prefers to characterize them as ‘rural’ over ‘agrarian’ in order to capture the fact that they look beyond the local agrarian base to expand accumulation but are never fully integrated in a wider regional setting. Such concepts are quite useful to bring attention to the local power relations that shape the nature of agrarian capitalism. Rutten also focuses on their common socio-cultural traits and economic limitations.

These concepts are especially useful in understanding how the politics of these classes helps consolidate them, as both authors explain in their work. In particular, common interests can enable them to develop class alliances. Balagopal (1987), for instance, argues that the wealthy, landed peasantry that leads the farmers movement never turns its ire against exploitative traders because some among them have diversified into this profession and together, as the ‘provincial propertied class’, they have developed common interests.

²⁴ See also McCartney and Harriss-White (2000).

²⁵ Elsewhere, she has used the concept of ‘micro conglomerate capital’ to describe the multiple modalities – ‘rent, interest, manufacturing and trade’ that drive accumulation in local agro-capitalism in Tamil Nadu (Harriss-White 2010, 52). It is not entirely clear if this category and ‘intermediate classes’ overlap.

However, these classes have distinct and different relations to means of production and therefore, different material interests. When these interests overlap, as when farmers become traders, they need to be understood in relation to each other but they also need to be understood separately when they are unrelated to each other or in conflict in different contexts. Harriss-White (2003) too recognizes the possibility of conflict within the intermediate classes.²⁶

Nevertheless, Harriss-White's juxtaposition of the intermediate classes with international capital under liberalisation is particularly useful. She argues that the former proved resilient until the turn of century due to the 'politics of markets' (50). Politics of markets refers to mechanisms and structures through which the intermediate classes maintain their dominance. This includes four key elements: a) non-competition within marketing systems, created through capital and social entry barriers; b) defending themselves against bigger capital by creating market niches or by 'super-exploiting labour' (52); c) opportunistic use of party politics to their ends; and, d) ensuring that social rules and networks, especially within the family and community, form the basis of market operations.

But over a decade later, the tension between local and international capital needs to be discussed further. This research study explores elements of such politics to examine the relation between these capitals. There is some evidence that they may not always be antagonistic: in a debate on Indian capitalism, for instance, Baviskar and Sundar (2008) write that 'flexible production connects multinational firms to domestic production' and note that 'the moneylender also doubles up as the fertiliser and seed agent' (88).

The argument about the alignment of agrarian capitalists with other economic groups also raises the issue of differences within the capitalist farmer class. In Chapter 2, we observed that both in Senegal and China overall patterns of accumulation (determined, for instance, by the source of capital and/or the nature of investments) are important in classifying different kinds of farmers, and even capitalist farmers. Given the extent of economic diversification in the Indian countryside, drawing out

²⁶ Another issue is how the intermediate classes are placed in relation to the big business class in the wider political economy (see Chibber 2003 for a discussion on the latter's power). This is of less relevance here but would help in sharpening the analysis of a combined rural or intermediate capitalist class.

broad patterns of accumulation by capitalist farmers in India would illuminate the nature of agrarian change.

Damodaran (2008, 315) identifies three different paths to industrial accumulation by castes and communities in India, i.e. transitions through the bazaar, the office and the field. This analysis indicates both the variety of diversification patterns and the salience of the local political economy in understanding why specific patterns have emerged.²⁷

In that vein, Rutten (1995) argues that the difference in terms of economic diversification is the chief factor differentiating wealthy farmers who merge with a class of rural capitalist entrepreneurs from other agrarian classes.²⁸ Moreover, when some families move out of agriculture, other upwardly mobile ones might move in to occupy the newly-vacated space (Upadhyaya 1988a; Djurfelt et al. 2008).²⁹ Indeed, small and medium landowners are less able to invest in non-agricultural avenues that would allow them to accumulate or facilitate their upward mobility: lower amounts of working capital and relatively restricted access to social networks mean their investments tend to be less lucrative.³⁰ Pattenden (2011), for instance, points out that gatekeeping does not afford the same benefits to gatekeepers from less wealthy farming and poorer labouring households in Karnataka's villages as to those from wealthier, landed households and this reinforces the patterns of social differentiation. The various case studies cited above indicate that when such landowners are successful, it is often through success in education or support from better-off kin.

At the macro level, Ranganathan (2013) points out that non-farm business contributed 10% and wages 63% of the total income of the smallest landholders. The corresponding figures for the largest landholders are 4% and 3%. While the percentage contribution of non-farm business to total income of the smallest landholders was much higher than for the largest, in absolute terms the average income for large households from non-farm business is roughly four times that

²⁷ Lerche (2014) has built on this typology to develop some aspects of the regional patterns of agrarian accumulation.

²⁸ Harriss-White (2010) also writes that by the 21st century, the gap between the agro-commercial classes and the producers who cultivate paddy for the former's businesses had increased considerably.

²⁹ Djurfelt et al. (2008) argue that the movement of large landowners out of agriculture has strengthened middle farmers, who they describe as 'family farmers'.

³⁰ Upadhyaya (1988a) argues that until the 1980s at least, the preferred investment option for smaller landowners was land.

earned by marginal and small landowners. This indicates that the large households have access to non-farm businesses that have a higher income potential. Moreover, large households are not reliant on wage labour and, as mentioned earlier, derive a large part of their income from farming itself. The most common non-farm businesses are wholesale and retail trade, followed by transportation and storage; the most common source of wage income is agricultural, followed by construction work.

This section argued that the position of the agricultural household, caste and kinship relations, the nature of State structures, and wider economic conditions are crucial to economic diversification by farmers. The next section focuses on the impact of macro-economic change in the form of liberalisation of agriculture and agricultural producers in India.

3.4 Liberalisation of Agriculture

The liberalisation of the Indian economy³¹ has generated a debate in recent years on whether there is an overall agrarian crisis in the Indian countryside. Those in favour of this position appear to suggest that agrarian accumulation has largely ceased. This section first discusses the nature of liberalisation and then examines the case for a crisis.

3.4.1 State vs. Market?

After Independence, India established a developmental state guided by Nehru's 'socialistic' vision, his belief in Soviet-style planning and in development as industrialisation (Chibber 2003; Frankel 2005). However, the Indian state was never hostile to private capital, even though it was constrained by numerous regulations.

Starting in the 1980s, but more decisively in the 1990s, the economy was liberalised, the plethora of regulations done away with in favour of the rule of the market, and space was created for the growth of the private sector across various economic sectors. Previously, it had been assumed that State intervention was necessary to meet economic development and social welfare objectives, but now the State came to be seen as patently inefficient and the private sector as the agent of development. While once private interests sought to be disciplined, bolstering of these interests became both morally and politically acceptable in this new phase. Moreover, these changes clearly worked in the interest of the socio-economic elite (Corbridge and

³¹ Note that liberalisation and neoliberalism are used interchangeably here.

Harriss 2000; Chandrasekhar and Ghosh 2002). While deregulation and privatisation were introduced in varying degrees from the 1980s, the push in 1991 also allowed for an unprecedented entry of foreign capital and emphasis on exports (Frankel 2005). Moreover, crony capitalism, i.e. the benefitting of a minority of capitalists with strong personal and financial links to the political elite, rose to new heights as part of the process of deregulation (Jenkins 1999; Mazumdar 2008).

However, it can be problematic to make neat distinctions between the period before and after the 1990s in terms of dominance of the State and the market, respectively. For example, the redistributive agenda was attacked decisively by the early 1960s by all kinds of oppositional groups, both within and outside Nehru's Congress (Frankel 2005, 203) and any disciplinary role of the Planning Commission was effectively over by the late 1960s (Chibber 2003).

This also applies to the agricultural sector. While the Green Revolution is commonly understood to be a State-led programme of agricultural transformation, it actually unfolded through the participation of various kinds of private (local, national and international) capital and international agencies. The production and distribution of technologies such as fertilizers, crop chemicals, tractors and irrigation equipment involved considerable private investment (B. Harriss 1981; R. Kumar 2016). Harriss-White (2003) also argues that intermediate classes managed to wrest control of the spaces which the formal State apparatus was unable or unwilling to regulate.

As a project under construction, 'an open-ended process' (Jenkins 1999, 1), liberalisation embodies elements of both continuity and change. How, when and why these contradictory elements play out can be instructive about the nature and impact of liberalisation on agriculture. Towards this, the next section discusses the relevant policies in which liberalisation of the agricultural sector is manifested, something rarely addressed in the majority of the literature on agrarian 'crisis'.

3.4.2 The Reforms: Nature and Impact

I begin with a discussion of production-related reforms, although that is not necessarily the chronological order in which reforms were introduced. The optimism of the Green Revolution resulted in agriculture no longer being a priority policy for the government in the 1990s (Reddy and Mishra 2009). There was a decline in

public investment in agriculture from the 1980s till the early 2000s³² and it was only the accompanying decline in agricultural growth that forced the government to reverse this trend to some extent (Ramachandran and Rawal 2009; Chand and Parappuruthu 2012).

At the macro level, however, liberalisation and especially India's joining of the WTO in 1995 created pressure to reduce the country's fiscal deficit by reducing various kinds of public expenditure, especially 'market-distorting' subsidies.³³ The (neoliberal) common sense is that subsidies, especially input subsidies, take already scarce resources away from investments that would increase the productive capacity of the sector as a whole (A. Sharma and Gulati 1995). In 1992, the prices of phosphate and potash fertilizers were decontrolled, resulting in price increases and by 2015, prices of all fertilizers, except urea, had followed suit (FAO 2005; Damodaran 2015). There were also changes in the framework of subsidized agricultural credit in the 1990s (Ramachandran and Rawal 2009), an issue I revisit below.

Subsidies for electricity in agriculture, on the other hand, have existed since the peak of the Green Revolution in the form of flat-rate tariffs or free electricity. Given their potential as a political tool, many state governments such as Punjab and AP continued them even under liberalisation. However, there is also a trend of re-metering agricultural electricity supply in some states (e.g. West Bengal) (Gulati and Narayanan 2000; Dubash and Rajan 2001; Reddy and Mishra 2009).

On the output side, the MSP increased more in the 1990s than in the 1980s, as a result of which the food subsidy paid by the government also increased (Chand 2005; Mukherjee 2015).³⁴ Chand argues that the government procurement and payment of MSP should be replaced by 'deficiency price payments' whereby the government would only pay farmers the difference between the price received and the MSP (when the former is lower). This would reduce the fiscal burden on the government and enable better market integration of farmers (Mukherjee 2015).

³² Annual growth rates of public investment during 1974-80, 1981-90 and 1991-2003 were 12.83%, -3.48% and 0.05%, respectively (Chand 2009).

³³ The 2015 negotiations in Nairobi led to an agreement wherein developing countries, including India, have to remove agricultural export subsidies by 2018, while developed countries have considerable flexibility in the same (EPW Editorial 2016).

³⁴ It should be noted that food subsidies build up not only through the MSP, but also through the volume of subsidized food and its distribution costs (Swaminathan 1999).

However, others argue that costs calculated by the Commission for Agricultural Costs and Prices (CACP), which form the basis of the MSP, are grossly underestimated (Swaminathan and Rawal 2015). The MS Swaminathan Committee Report on Farmers, 2006 also argued that the MSP needs to be increased from its existing level and extended to more crops and regions to secure the interests of farmers (Press Trust of India (PTI) 2013; Dutta 2017). But while the level of MSP may be debated, the fact remains that it is only implemented in some parts of the country, namely, Punjab, Haryana, western UP and AP, and then only for paddy and wheat (Deshpande 2003; Ali et al. 2012). Other regions and crops receive prices which are often lower than the MSP or are quite volatile.³⁵ The debates and realpolitik around individual subsidies notwithstanding, it is widely agreed that the decline in agricultural subsidies of different kinds has resulted in an increase in input costs for farmers and squeezed their profit margins. Moreover, market integration, the panacea suggested by pro-liberalisation scholars, can have differentiated impact on different rural classes (Section 2.2).

Another important assumption in agricultural policy under liberalisation is that the progress of the agricultural sector lay in 'getting prices right' (Sen 1992; Reddy and Mishra 2009). Trade liberalisation is crucial to achieve this. Accordingly, India, like many other developing countries, prioritized exports as the way forward in agricultural development in the early 1990s. Over the years, the central government removed restrictions on agricultural exports and barriers to the import of agricultural commodities, including staples like wheat and rice. Chand (2004) argues that agricultural trade (exports and imports) as a percentage of agricultural GDP increased from 4.95% in 1990-91 to 9.71% in 2001-02. This resulted in increased price volatility of crops and increased farmers' vulnerability (Chandrasekhar and Ghosh 2002; Ramachandran and Rawal 2009; Reddy and Mishra 2009). Commercial, especially export, crops are incentivized by the government but a slump in world prices can have disastrous effects, as in the case of rubber and pepper in Kerala and ginger in Karnataka (Jeromi 2007; Münster 2015).

³⁵ In states like West Bengal and Tamil Nadu, bulking activities by brokers, commission agents and/or mills serve to reduce costs of public procurement (Harriss-White 1996, 2008). This research will show that this is also true for Punjab, a crucial difference being that farmers receive the MSP despite this.

As mentioned earlier, privatisation has been an important pillar of liberalisation. I now discuss how this has been attempted in some of the most relevant aspects of agriculture.

We start with land. While land reforms had effectively fallen off the policy agenda by the 1980s (Patnaik 1986), there has been a complete reversal on land reform policy under liberalisation. Some states, such as Gujarat, Madhya Pradesh, Karnataka and Maharashtra, have relaxed ceilings on landholdings and introduced provisions to enable corporate firms to lease-in government wastelands, while others, for example, Punjab, are in the process of doing so.³⁶ This is supported and promoted by agribusiness firms, political parties and farmers' organisations representing large farmers (S. Singh 2006). Even without the laws, corporates resort to manipulation and deceit to establish control over land for agriculture (Jenkins 1999; Ghosh 2003). In recent years, 'land grabs' have been at the centre of struggles around development both in India and across the developing world. However, Levien (2015) has argued that land grabs in India are almost always for non-agricultural processes and any impact on agrarian change is incidental at most.

Another controversial area of reform concerns seeds. Starting with the National Seed Development Policy of 1988, the Government of India has undertaken multiple policy and legislative measures which expand the scope of private domestic and transnational capital in seeds. While the new policies give TNCs access to Indian markets by partnering with domestic companies and importing foreign seeds, they have also allowed domestic seed companies to export to the expanding Asian and African markets. Simultaneously, the public sector in seeds has declined and now limited itself to high-volume, low-value crops such as paddy, finger millet and groundnuts. Further reforms are being proposed which, according to some scholars, will cause a major infringement of the seed sovereignty of the farmers, as they would not be able to register their own seeds and would have weak remedial options vis-à-vis seed companies (Shiva 1992; Shiva and Crompton 1998; GRAIN 2005).

³⁶ Often a pro-poor argument is made for the liberalisation of land-leasing, i.e. legalizing and de-regulating leasing will encourage larger landowners to move out of agriculture and allow smaller landowners to expand their holdings. However, given strong tendencies towards reverse tenancy and unequal power relations, there is no guarantee that this optimistic prophecy will be realized (Haque 2000).

An important area of dispute within this is the commercial use of GM crops; currently Bt cotton is the only one legally permitted. Shiva (2004) has described GM seeds as ‘terminator seeds’, as they are engineered to be sterile, thus perpetuating farmers’ dependence on the corporates that produce them. She goes on to argue that these seeds are more susceptible to pests, cause losses to farmers and may be responsible for suicides. Glover (2010) has argued that pro-GM scholarship glosses over evidence that shows that the adoption by and impact on farmers, especially smallholders, is not unequivocal but shaped by socio-economic differences and institutional conditions.

Such arguments, however, are undermined by evidence that farmers, including smaller farmers, in some parts of India are actively using and promoting these seeds. These studies recognize that such farmers could be at greater risk if institutional support is not extended to them but argue that since farmers use them as one of many different seeds as a way of managing risk, the step forward lies not in blanket opposition but appropriate regulation (Herring 2007; Roy et al. 2007). The strength of these arguments lies in their assertion that farmers actively participate in shaping the terms of farming, rather than portraying them as passive and ‘supine’ (Herring 2007, 130).³⁷

Yet another crucial area for agriculture where privatisation has been introduced is credit. As a part of its financial reforms, the Government of India began advocating a market-oriented and profit-driven banking system. This marked a reversal of its policy of ‘social and development banking’, which was instituted to give priority to areas and social groups that had inadequate access to banking services (Ramachandran and Rawal 2009; Ramachandran 2011). Consequently, in the 1990s there was a decline in the number of rural branches of commercial banks and in the growth of credit flow to agriculture. The credit flow was apparently revived in the late 1990s (Chand and Parappurathu 2012). However, studies have shown that this revival was a result of a gross distortion of what constitutes agricultural credit – it rested fundamentally on an expansion of the definition of agriculture for credit purposes to include credit to different types of corporate agribusinesses. A

³⁷ The benefits of transgenic seeds for farmers notwithstanding, there is a consensus that large corporates are poised to benefit more than small firms through their spread since the latter do not have comparable resources to invest in such technology (Shiva and Crompton 1998; Herring 2007).

significant increase in credit limits and the urbanisation of agricultural credit further indicate the shift away from the conventional understanding of direct agricultural credit, i.e. as credit to farmers, to credit to large capitalists and large agribusiness firms (Ramakumar and Chavan 2007, 2014). Rice mills in Punjab, for example, are argued to have easier access to credit under liberalisation, allowing for increased investments (Kaur et al. 2007). The reforms also allowed private (including foreign) banks to operate on almost the same conditions as the public sector, but their performance with respect to priority sector lending, especially agriculture, has been poor (Chandrasekhar and Ray 2005).

The nostalgia for the period of nationalized and ‘social and development’ banking is somewhat misplaced given that even then there was a considerable difference between large and small farmers’ access to formal credit (see Frankel 1971). However, there has certainly been a further decline in the availability of formal credit to the disadvantaged sections of rural society such as the Dalits and small and marginal farmers (Shah 2008; Chavan 2010; Ramakumar and Chavan 2011). Moreover, regional rural banks, largely government-owned, have not been allowed to recruit new officers since the 1990s. Cooperative banks which continue to have a wide, if ineffective, reach even today have also suffered due to the application of market-led assessment norms to them and the unwillingness and inability of central and state governments to infuse capital in them. The rural economy has thus been almost systematically credit-starved (Sen 2005; Swaminathan and Rawal 2015).

Therefore, the importance of informal sources of credit has been reinforced in this period (Shah 2008; Ramakumar and Chavan 2011). AP, Punjab, Bihar, Assam and Rajasthan are said to have the highest levels of non-institutional credit (NCEUS 2008; Ramachandran et al. 2010). There is little information in this literature on how these reforms shape specific complexes of credit relations on the ground, but it does provide a framework within which micro-level changes in credit relations may be understood.

Finally, we turn to reforms related to agricultural markets. The focus in these reforms has also been on increasing the presence of the private sector and on removing ‘exploitative’ intermediaries, especially commission agents. The central government passed the Model APMC Act in 2003 and, following its lead, many

states amended their APMC Acts resulting in the opening up of new procurement channels for farmers' produce, e.g. private procurement yards, direct sales, open markets, public auctions, farmers markets, contract farming etc.³⁸ The state governments which have promoted direct marketing by establishing farmers markets are Punjab (Apni Mandi), Odisha (Krushak Mandis), AP (Rythu Bazars) and Tamil Nadu (Uzhavar Sandies) (Agriculture Division 2011; Krishnamurthy 2011; Chengappa 2012). Despite these efforts, it is widely known that commission agents and moneylenders continue to be important actors in agricultural markets, even though their role has been transformed (Krishnamurthy 2011; Singh and Dhaliwal 2011). At the same time, private agribusinesses are creating new kinds of intermediaries (Narayanan 2012; R. Kumar 2016). Further studies are required to investigate if and how efforts to reform the markets have impacted long-standing players.

Here it should also be noted that the Shanta Kumar Committee Report of 2015 recommended a reform of the FCI. It advocates FCI's 'unbundling' into its various core functions: procurement, transportation and storage, and distribution. The report also recommends that the private sector should be made major stakeholders in these functions, and public-private competition encouraged. A crucial recommendation is that the FCI should withdraw from all procurement operations in states such as Punjab, Haryana, AP, Madhya Pradesh, Chhattisgarh and Odisha where it has been procuring efficiently for the past several decades. Instead, it should shift operations elsewhere (e.g. Bihar, Assam, eastern UP and Jharkhand) and develop procurement capacities there (FCI 2015). Given the centrality of the FCI to the food grain market across the country, this is bound to have a significant impact if implemented. Responding to such suggestions in the 1990s, Swaminathan (1999) argued that the FCI is not necessarily less efficient than private traders in procuring food grains from farmers.³⁹

A strong case is also being made by transnational capital to allow FDI into retailing and processing of food items, with the claim that this will be more rewarding for

³⁸ In 2017, the central government decided to reform the Model Act and to withdraw contract farming from it since the 2003 Act did not have the desired impact. Contract farming is to have a separate Model Act (Y.S. Sharma 2016; Mukherjee 2017).

³⁹ Elsewhere, Swaminathan (1996, 2000) argues that reduction in consumer food subsidies under liberalisation would severely affect food security.

producers and consumers. This, however, has been vociferously opposed by domestic traders who feel threatened by the possibility of more powerful international capital outcompeting them (H.S. Singh 2012; *The Hindu* 2012) and reminds us of the discussion on intermediate classes in Section 3.1.

Futures trading is another area of reform in agricultural markets. There are 5 national and 16 regional commodity exchanges trading in over 90 agricultural commodities. The spot exchange markets in India are National Spot Exchange Limited, National Commodity and Derivatives Exchange (NCDEX) spot and Reliance Spot Exchange (Elumalai et al. 2009; Jairath 2009; Agriculture Division 2011). The government revived futures trading in 2003 by expanding the permitted list of commodities. In 2007, it stayed futures trading in rice, wheat and some pulses, possibly because it was perceived as a major cause of price volatility, although the stay on wheat was lifted in 2009 (Elumalai et al. 2009; N.P. Singh et al. 2009).⁴⁰

Having surveyed the nature of the reforms, the following section discusses whether and to what extent they have caused an agrarian crisis.

3.4.3 *Debating the Crisis*

Chapter 1 stated that the dominant view on the Left in India is that liberalisation has caused a general agrarian crisis. The agricultural growth rate has declined in the period of liberalisation, from 3.08% in the 1980s to 2.57% between 1992-93 and 2005-06. Moreover, for the first time in twenty years the population growth rate exceeded that of food production (Reddy and Mishra 2009). It has been argued that the decline in public investment in agriculture, subsidies and credit combined with exposure to the volatile international market led to this crisis.

There is no denying that these factors have made the agricultural population more vulnerable. However, based on more recent figures, it is now widely accepted that while there was a severe crisis in agriculture from 1997-98 to 2002-03 when its average annual growth rate was 0.5%, agricultural growth has since picked up considerably, averaging around 2.9% from 2003-04 to 2011-12. Further, a region-wise disaggregation of growth rates shows that even in the former period there was no country-wide crisis (Bhalla and Singh 2009; Ramachandran 2011; Chand and Parappurathu 2012; Lerche 2013). Although growth rates have fluctuated

⁴⁰ See Ghosh (2009) for the relation between financialisation and the food crises of 2007-08 and 2010.

considerably since that period,⁴¹ it is clear that liberalisation has not led to a blanket crisis in the growth of agriculture.

The argument about crisis, however, goes beyond growth rates and deals with the forces and processes underlying liberalisation. Patnaik (2006, 2011) argues that the principal contradiction faced by India today is that between neoliberalism and the working masses. She equates neoliberalism with colonialism and imperialism and calls it ‘the *re-emergence* of finance’ (Patnaik 2006, emphasis added).⁴² She argues that like colonial policies, neoliberalism is further deepening the international division of labour in agriculture wherein developing countries produce export crops for advanced countries at the expense of their own staple food crops, thus creating food insecurity and transferring global price volatility to its own farmers. This has caused an overall crisis in agriculture in the global South since the mid-1990s. She goes as far as to say that the ‘earlier phase of capitalist development in agriculture [in India]...has virtually ended’ (ibid., n.p.) and that ‘India is back to the per capita output level of the first plan period 1950-55’ (Patnaik 2011, 34). This, according to her, is evidenced by the large number of farmer suicides and the decline in the average consumption of cereals.

Elements of Patnaik’s argument can also be observed in the work of other scholars. Rakshit (2011) argued that all the classes of farmers in his study areas in West Bengal were being exploited by ‘outside traders’ and others representing transnational capital. Basole and Basu (2011) have argued that integration of the Indian economy with the global system has encouraged the growth of the petty commodity production-led informal sector and this has slowed the process of class differentiation.

From the framework of political economy, there are two problems with this argument: firstly, the treatment of all agriculturalists as a mass of ‘peasants’ or even when that is not the case, the idea that liberalisation is being experienced in the same way by everyone; secondly, the portrayal of agrarian capitalism in India as passive, i.e. not accounting for the response of different classes to a changed policy context.

⁴¹ The agricultural growth rate was 1.6% in 2012-13, 4.7% in 2013-14 and 1.1% in 2014-15 (Rajakumar and Shetty 2015). These figures may not be strictly comparable to the average growth years given earlier.

⁴² This view resonates with that of Araghi discussed in Chapter 2.

Admittedly, this is a broad-brush representation of this position. Reddy and Mishra (2009) and M.S. Swaminathan (2008), for instance, recognize that there are different kinds of farmers and small and marginal farmers are worse off than others, but that does not prevent them from arguing that the crisis extends to the agricultural sector as a whole.

These tensions are better resolved in the other, less dominant and more recently developed, view on the Left which argues that the crisis is limited to small and marginal landholders and labourers. Based on macro-level statistics as well as empirical work, these scholars have argued that class differentiation is continuing in the Indian countryside. Though it is not leading to a classic agrarian transition, there are ex-landlords and large capitalist farmers who continue to appropriate surplus value and invest in agricultural and non-agricultural avenues (Ramachandran 2011; Lerche 2013).⁴³

Some studies use macro data to engage with debates around agrarian class dynamics in contemporary India, the obvious shortcoming being the neglect of context specific insights. Nevertheless, a study of the spread of tractor use is instructive. It shows that the growth rates of tractor sales corresponded with the growth rates of the agricultural sectors, reflecting capital accumulation. Notably, it also showed that most of this growth happened in regions other than the Green Revolution areas of north India (Anupam Sarkar 2013).

Studies centred on different regions and processes address the questions of accumulation and/or differentiation more directly. Village studies in AP and Rajasthan, for instance, show that the agricultural elite make substantial, and substantially higher, profits on major crops compared to the rest of the peasantry, pointing clearly to accumulation and differentiation (Ramachandran et al. 2010; Swaminathan and Rawal 2015). In West Bengal, Rakshit (2011) finds a higher concentration of assets and better technological adaptation and agricultural yields among what he terms landlords and rich peasants compared to agrarian classes lower down the hierarchy. In Bihar, capital accumulation is limited both in scale and to the

⁴³ Even though he does not empirically define them, Rao (2009) argues that although the ‘upwardly mobile farmers’, and not the ‘farmers at the top’, are the most vulnerable to the increased exposure to risk under liberalisation, they are also the ones with the most potential to contribute to agricultural growth.

fairly small proportion of large peasants and landlords, but the economy is dynamic enough to have moved quite decisively away from semi-feudalism (Rodgers et al. 2013). A crop-focused study showed that ginger farming in Karnataka by farmers from Kerala has led to increasing polarisation between highly successful accumulators and others on the brink of ruin (Münster 2015).

Studies on new agricultural procurement initiatives such as contract farming and supermarket retail show that they benefit large farmers more than smaller ones (S. Singh 2006; Pritchard and Connell 2011; Swain 2011; Narayanan 2012).⁴⁴ It would be reasonable to assume, therefore, that in areas where these initiatives are widespread, there would be implications for class dynamics. Of course, these studies also argue that the corporates involved are invariably more powerful in these arrangements. For example, many retail companies routinely deal with individual growers, make no commitment to buy produce from farmers and purchase only 'A Grade' produce (Pritchard et al. 2010; Agriculture Division 2011). In contract farming, although companies make a prior commitment to purchase the produce at a certain price, they may reject it on quality grounds, causing severe losses for farmers (S. Singh 2006). Alternatively, they may micro-control the production process, leaving little for the farmers to do (Narayanan 2012).

Another important point arising from these studies is that the idea of 'the corporate' needs to be unpacked. They can be multi-national or domestic. They could work independently or as 'limbs of conglomerates' (ibid., 89). They could be working upstream or downstream, new to dealing in the particular commodity or experienced. This is significant since this would have an impact on how these firms engage with the farmers with respect to their strategies and constraints. For example, Narayanan (ibid.) points out that marigold-crushing firms gave bonuses to farmers who delivered larger quantities of marigolds to prevent supplies entering the open market. Thus, the nature of competition that exists in the market for a specific commodity affects the forms of engagement between the firm and the farmer. In other words, as Harriss-White has argued, the fact that markets constitute a system with some

⁴⁴ Richa Kumar (2016), however, argues that poor soybean farmers could potentially get a better price than rich farmers from ITC-ABD, the corporate purchasing the crop, as productivity depended more on environmental than socio-economic factors.

internal dynamics has a bearing on how they impact agriculture and agriculturists (Chapter 2).

Our discussion shows that there is not enough evidence to argue that liberalisation has led to an overall agrarian crisis in India. While some classes are definitely under stress, the sector continues to be dynamic and one that allows for accumulation by capitalist farmers. However, context-specific studies are few and far between and often generalisations about farmers and the agricultural sector are made to suffice. There are even fewer studies which discuss the response of different farmers through a lens beyond suicides and social movements, i.e. in the more mundane aspects of crop choices, accessing credit, negotiating with traders, etc. Here, too, the focus is rarely on accumulators and their strategies. This research aims to contribute to filling this gap in the literature.

Chapter 4. Agrarian Capitalism in Punjab

The previous chapter outlined the broad contours of Indian agriculture. It drew out the differences between farmers on the basis of land ownership and operational holdings, as well as patterns of economic diversification. I also discussed what kinds of changes the liberalisation of Indian agriculture entails and the existing evidence of their impact on agricultural producers.

In this chapter, I focus on the state of Punjab where fieldwork for this research was conducted. I first discuss the long history, from the colonial period to the Green Revolution, through which it has become the most agriculturally developed state in India. The chapter then moves on to discuss the major issues that have emerged since the 1980s (i.e. in the post Green-Revolution period), including the unviability of smallholdings and the exploitative role of the commission agent or *kacha arhtia* (henceforth arhtia). Finally, I reflect on the issue of agrarian crisis in Punjab. The last section of this chapter is a combined conclusion for Part I of the thesis.

4.1 A Political Introduction

Punjab Province under colonial rule was a large region including present day Punjab, Haryana, Delhi, parts of Himachal Pradesh and Punjab state in Pakistan. This research is limited to the state of Punjab in India as it exists today. However, it is useful to understand some aspects of the history of the larger Punjabi region.

Punjab was ruled by Maharaja Ranjit Singh from 1801 to 1839. After his death, the kingdom quickly succumbed to colonial aggression and was annexed as a province of British India in 1849. British governance here was guided by the fact that it was a frontier province and did not join the 1857 rebellion. This, and the fact that the British now had a few decades of experience governing the sub-continent, enabled them to cultivate Punjab as a loyalist state by engaging the population in military service and through agricultural development.

The Punjabis, especially the Jats (the dominant pastoralists and peasants in the region), were considered one of the ‘martial races’. Moreover, their geographical proximity to the border of British India meant that they did not need to be paid the

extra 'frontier allowance' when serving in the army. By the beginning of the 20th century, Punjabi soldiers formed a large majority of the British Army in India (Talbot 2007).

The other pillar of colonial governance in Punjab was agricultural development, discussed in detail below. The British transformed the largely pastoral, semi-arid region of pre-division Punjab into a 'model agricultural province' from the 1860s. Their most well-known initiative is the building of canal colonies, starting in 1886, in what was west Punjab, now in Pakistan. They constructed perennial canals in the erstwhile pastoral highlands west of the River Sutlej and settled farmers from the eastern side in the villages ('colonies') built along the canal.

The construction of canal colonies was framed within the discourse of order and 'the embodiment of science, modernity, and progress' (5), a vision that was not fully realized (Bhattacharya 2012). The government sought to create an ordered and law-abiding occupant population in these colonies. To this end, at least some of the plots were reserved for military personnel and contractors, thereby combining its aims of military loyalty and 'development' (ibid.; R. Kaur 2008). Partition in 1947 led to the reverse migration of a large majority of the Sikh farmers in the canal colonies back to east Punjab on the Indian side of the border. The much larger landholdings of the canal colonies remained in Pakistan while the Indian Punjab faced a 'land crunch' and could allot only much smaller plots to refugees/returnees (R. Kaur 2008).

In 1966, the erstwhile Punjab state in India was divided into Punjabi-speaking Punjab and Hindi-speaking Haryana with some hilly regions being merged with the state of Himachal Pradesh. This was done on the back of the Punjabi Suba movement which started in the 1950s, as part of which Sikhs were mobilized in large numbers. It was only after this division that Sikhs became the majority in Punjab, although by a small margin (Telford 1992).

Perhaps the most important milestone in this trajectory was the period of Sikh militancy and State repression from the late 1970s to the early 1990s. A longer history of centre-state relations and politics within the Sikh community created and fed into the turbulence of this period. Interestingly, many scholars have argued that the wave of militancy drew on a mass base of youth from middle and poor farming

households that emerged as a result of the Green Revolution (ibid.; Shiva 1991; B.P. Singh 2010).

The political crisis of this period was resolved through the 1997 state elections when the *Shiromani Akali Dal* (SAD) came to power. Jodhka (2005) argues that it was only in the late 1990s that the political leaders of the region felt confident enough to re-assert region-specific demands politically since militancy had strong secessionist tendencies. Since then the state has been stable politically, although some of the issues of the period have begun to resurface.⁴⁵

4.2 The State of Agriculture

Present day Punjab constitutes less than 2% of the land mass of India and only a marginally higher proportion of its population (27.7 million; 2.3%). Across a total of 22 districts, around 62% of the population is rural. Geographically, Punjab, for the most part, consists of three alluvial plains: Majha or the Upper-Bari Doab (the region above the River Beas); Bist Doab (between Beas and Sutlej); and Malwa (everything below Sultej). In the north-east, a substantial part is composed of the Shivalik Hills. Majha and Bist Doab have many seasonal streams, fertile clay loamy soils, continental climate (cold winters and hot summers), are densely populated and support intensive agricultural practices. Malwa, on the other hand, is hot, arid and relatively more sparsely populated. An extensive canal system and fertile soil allows for intensive agriculture in the eastern parts, but in the south-west agriculture is extensive or moderately intensive (Department of Land Resources n.d.; Planning Commission 2004).; Planning Commission 2004).

The Jats, mostly Sikh, are the dominant agricultural caste in the state and are argued to be the most politically powerful community. The Hindu mercantile castes or *Mahajans* such as the *Banias*, *Khatri*s and *Aroras* are the historically dominant communities in the region in trade and moneylending (Damodaran 2008). According to the 2011 Census, Sikhs (including Jats and Dalits) constitute 57.69% of the total population while Hindus (Mahajans and other castes) constitute 38.49%. Dalits constitute almost 32% of the total population, the largest proportion of any state

⁴⁵ See J. Singh (2016) for an overview of the issue of the Satluj-Yamuna canal and Dogra (2015) on recent communal tensions.

(Government of Punjab 2015). Other Backward Castes comprise approximately 20-25% of the total population.⁴⁶

In 2014-15, agriculture and allied sectors contributed 26.68% of the state's GDP (Table 4.1). As the table shows, this share has been declining steadily over the years. In 2009-10, 44.2% of the total population engaged in agriculture, lower than most states but significantly higher than Kerala. By contrast, only around 12% of the population is engaged in industry, close to the national average but somewhat lower than, for example, West Bengal, Tamil Nadu and Haryana (Lerche 2014). Together, these figures indicate that although a structural transformation has taken place in Punjab which is more advanced than that of many other regions, agriculture continues to be a core sector in terms of contribution to GDP and employment. Industry has not developed as much as might have been expected within classical interpretations of the agrarian question (Byres 1996; Lerche 2013).⁴⁷

Table 4.1: Percentage share of agriculture and allied sectors in the GDP of Punjab for select years

Year	2003-04	2008-09	2009-2010	2012-13	2014-15
% share	36.40	33.16	30.60	26.72	26.68

Source: Directorate of Economics and Statistics, various years

Pritam Singh (2009) has argued that the nature of India's federalism and the central government's twin goals of achieving food self-sufficiency and reducing inter-regional disparities have been responsible for placing Punjab on an agriculture-dependent path of development. While agriculture and industry are both formally state subjects under the Indian Constitution, the central government retains the right to intervene based on 'national interest'. Therefore, while Punjab was supported with respect to agricultural development, it was deprived of central public sector investment in industry.

As in the rest of India, the service sector has grown substantially and constituted 48.8% of the state economy in 2012-13 (Planning Commission 2014). While this is less than the India-wide proportion of around 58%, it serves to dispel the popular myth of the dominance of agriculture in Punjab's economy. Inderjeet Singh (2016)

⁴⁶ The Indian state does not disclose the percentage of OBCs. This estimate is borrowed from newspaper articles (Chauhan 2007; Punjab News Express 2016).

⁴⁷ This is also an assumption of mainstream economic dual sector theories, such as the Lewis model.

points out, however, that this growth is uneven and that the service sector has weak linkages with agriculture.

Despite some constraints on all-encompassing development of the state's economy, Punjab is the richest state agriculturally and in 2012-13 had the highest average monthly income and consumption expenditure per agricultural household (Table 4.2).⁴⁸ Punjab also had the second highest (after Kerala and before Haryana) rural monthly per capita consumer expenditure in the country; other states had distinctly lower figures (NSSO 2014b).

Table 4.2: Average monthly income and consumption expenditure per agricultural household in 2012-13 (Rs)

	Punjab	India
Income	18059	6426
Consumption expenditure	13311	6223

Source: NSSO 2014b

Kannan (2015) argues that Punjab has been the exception to the trend of falling farm income levels under liberalisation. On the basis of data from National Accounts Statistics and the Cost of Cultivation of Principal Crops in India, he estimates income from a set of major crops across the states of Karnataka, Maharashtra, Punjab and West Bengal. He estimates that in Punjab, average farm business income per hectare has increased from Rs 12,559 during 1981-82 to Rs 20,247 during 2001-02 to 2007-08. Over the same period, income per hectare for paddy increased from Rs 15,653 to Rs 25,842 and for wheat from Rs 10,454 to Rs 16,959. Data from the NSSO 70th round also shows that the returns per hectare to investment are highest in Punjab compared to all other states both for *rabi* (winter) (Rs 82,271) and *kharif* (summer) (Rs 114,597) crops (Ranganathan 2013).

However, these figures mask the distress that does exist in the agricultural sector of Punjab. This distress lies not in the sector as a whole but amongst the smaller farmers and the landless. Before discussing this, the following sections trace the trajectory of agrarian development in the state from the colonial period onwards and with reference to relevant historical and contemporary debates.

⁴⁸ Table 4.2 shows that average income levels in Punjab are three times that of India, while consumption expenditure is twice as much. This is puzzling but cannot be explained by this research.

4.2.1 A Historical Overview

As mentioned above, Punjab was placed on a distinct trajectory of agricultural development in the colonial period. The canal colonies saw a significant increase in agricultural output in the 1880s onwards, but this growth had plateaued by the 1920s (possibly due to the spread of genetically homogeneous wheat and cotton amongst the colonies from the 1900s to the 1930s), leaving them comparable to other prosperous areas of the province. Moreover, small farmers in the latter performed better than the large ones in the canal colonies due to availability of family and other labour to work on the farms (Bhattacharya 2012). South-eastern Punjab (present day Haryana) was less prosperous since it was arid. There is, however, a historiographical debate about whether or not the colonial legacy better prepared the region for the capitalist development that followed.

Mukherjee (2005) argues that, as in other parts of the country, colonialism inflicted structural constraints on Punjab's agriculture. Colonial rule saw the commercialization of both land and revenue in the province, but farmers, especially smallholders, suffered a crushing tax burden. Therefore, agrarian capitalism emerged in the state after Independence as a break in history. Bhattacharya (1983, 1985), on the other hand, argues that by the early 20th century, a section of rich peasantry was able to contribute to the expansion of productive forces in agriculture and therefore an expansion of agrarian capital, especially in central Punjab. By the 20th century, these peasants also dominated the land mortgage market as mortgagees and cultivated the land directly. He also argues that the leasing-in and leasing-out of land by small and large landholders was guided by different concerns and constraints. This debate is particularly interesting for understanding the emergence of agrarian capitalism in Punjab, but it lies beyond the scope of this research. There is, however, a related discussion on indebtedness and the role of moneylenders that is relevant to this research and discussed below.

By the 1880s, the indebtedness of Punjab's farmers had been recognized as a major problem. The non-agricultural or merchant moneylenders (*sahukars* or Mahajans,) were identified as the culprits: it was argued that peasants had to part with their land due to their inability to service their debts. The Punjab Land Alienation Act of 1900 was enacted to prevent this land from passing on to the *sahukars* and to protect the *zimidars* or farmers. However, despite the Act, farmers' indebtedness continued to

expand in subsequent years. Darling (1925) argues that the Act was successful in checking rising indebtedness only temporarily and that the small farmer could escape indebtedness either through exceptional frugality or through another source of income (e.g. military service, migration etc.). He added that both the distress of the small farmers and the conspicuous consumption of the well-off farmers contributed to the volume of indebtedness.

Mridula Mukherjee (2005) argues that this can be explained by the fact that the decline of the *sahukars* was accompanied by a rise in agricultural moneylenders in the advanced areas. The latter were able to mobilize capital for moneylending not only through agriculture but also other sources such as migration and military service. Land mortgages were the dominant mode of extending credit and meant effective control over the land. Agricultural moneylenders were interested in land in the advanced areas because they could further benefit financially by leasing it out. In backward areas, the *sahukars* remained dominant and engaged in usury as the agricultural moneylenders were not interested in investing in land with little value.

Like Mukherjee, Bhattacharya (1985) argues that the *sahukars*' control over the marketing process had reduced. But unlike her, he explains this not through the rise of agricultural moneylenders but through the emergence of alternative modes of marketing. Rich peasants were able to maintain stocks and sell directly in wholesale markets as the nature of the credit arrangement did not require them to repay the loan in crops. Consequently, their participation in the credit market and relations with farmers became markedly different to those of smaller, poorer peasants. Some credit advanced to farmers, for example, effectively became forward purchases – meant only for ensuring supplies, not for regulating prices. This resonates with arguments by Bharadwaj and others (Section 2.2) that market relations are often rooted in production structures. Moreover, although Bhattacharya also agrees with the emergence of agricultural moneylenders, he argues that they used mortgages as a way to expand self-cultivation rather than for usury alone; in other words, mortgages were a form of land-leasing for these moneylenders.

It is notable that irrespective of which version of history one accepts, it is evident that *sahukars* were unable to prevent rich peasants from accumulating. The rise of

the agricultural moneylenders, rent-seeking or self-cultivating, stands testimony to this, as do the changes in the modes of marketing by the rich peasants.

As elsewhere in the country, after Independence Punjab underwent a series of land reforms which created conditions conducive to the emergence of capitalist farmers. Several clauses in the reform legislation and manipulation of the same by landowners allowed them to evict tenants, leading to large-scale evictions that continued from the mid-1950s to the early years of the Green Revolution. According to one account, 500,000 tenants had been evicted by 1962 alone and only 36,000 were resettled (Gill and Ghuman 2001).⁴⁹

The ceiling on individual land ownership was established in 1972: the limit was set at 7 ha. (17.3 acres) for irrigated land with two crops, 11 ha. (27 acres) for irrigated land with one crop, and 20.5 ha. (50.5 acres) for 'dry' land (Government of Punjab 1973).⁵⁰ As in other parts of the country, these ceilings were commonly evaded (Iyer 2001). A few years ago, some farmers' unions in the state asked for the first category's land ceiling to be increased to 10 ha. (25 acres) and it was subsequently revised to 8.2 ha. (20.5 acres) (Randhawa 2013).⁵¹ In addition to the above, compulsory consolidation of landholdings incentivised farmers to make fixed capital investments in land. Consolidation was initiated in the pre-Independence era but started in earnest from the 1950s and continued until the 1980s (Gill and Ghuman 2001).

Given the nature of landholdings in the state and colonial legacies in the form of an incipient rich peasantry and commercialized agriculture, Punjab emerged as an important cornerstone of the 'betting on the strong' policy that framed the Green Revolution. It was one of the first states to be included in the 1961-63 IADP mentioned earlier and then in the IAAP (Frankel 1971). Apart from the general

⁴⁹ Therefore, I would like to state a tentative disagreement with Mukherjee's argument that since agricultural-moneylenders were as exploitative and usurious as the saukars, the social composition of creditors is irrelevant for the direction of agrarian change. Bhattacharya's evidence shows that at least some of the former used moneylending to expand their own cultivation. To the extent that these cultivators would have overlapped with those that emerged as proto-capitalist farmers through land reforms, their social composition might have been critical to the nature of agrarian change.

⁵⁰ Note that 'hectares' is preferred where government data is used since this is the unit used in national accounting. However, acre equivalents are given here and 'acre' is used in the empirical chapters since that is the unit of reference for all agriculture-related issues in the field.

⁵¹ In contrast, a 2013 central government draft policy asked states to limit their land ceilings to 15 acres (Jigeesh 2013).

characteristics of the programme, Punjab benefited from a proactive state government and the targeted research of the Punjab Agriculture University (PAU) and other State-supported research centres, as well as their extension work (Frankel 1971; Aggarwal 1973).⁵²

To give a sense of just how successful this programme was in Punjab, the total output of wheat increased by nearly 200% from 1960-61 to 1970-71, and by 600% to 1990-91. The total output of paddy, an improved variety of which was introduced in the mid-late 1970s, grew by around 28 times between 1960-61 and 1990-91 (figures derived from Kalkat 2008). Mann (2017) notes that while wheat's share of total cropped area in the state stabilized at 49% in the 1970s, the area under paddy reached its peak of 40.76% in 2014-15 by displacing other crops – various pulses, oilseeds and coarse cereals.⁵³

An inordinately large proportion of Punjab's rice is allocated to the central pool of food grains before being channelled to the PDS of different states. In the early 1980s, Punjab's contribution to the central pool holdings stood at 45.3% of the rice total and an enormous 73% of wheat. Since then its percentages have declined due to stagnant yields and increasing contributions by other states, but it stood at a substantial 25.1% and 33.6%, respectively, in 2012-13 (Government of Punjab 2014).

4.2.2 *Emergence of Agrarian Capitalism*

For Punjab, the Green Revolution was also nothing short of a revolution in another sense, i.e. it decisively ushered the state into agrarian capitalism, a kind of 'capitalism from below' (Byres 1986). The state saw the emergence of capitalist farmers for whom farming transformed into a commercial enterprise. As discussed in Chapter 3, it is widely agreed that the medium and large farmers at the time reaped greater benefits from the Green Revolution since they had the resources to invest in the biochemical and mechanical inputs HYV seeds required.

Small and marginal farmers were unable to reap equal benefits, and in some cases their conditions worsened in absolute terms (Frankel 1971). These farmers could only make investments if they took out loans (from cooperatives, commercial banks

⁵² Aggarwal (1973) suggests that the state government was compelled to have a policy bias towards farmers due to their political power.

⁵³ The total cropped area here is the cropped area under the state's 17 major crops that constituted 90% of the actual cropped area in 2014-15 (Mann 2017).

or informal sources), which implied that part of their income would be spent in debt-servicing. This trapped them in a cycle of indebtedness from which only a lucky few escaped. Some of this small and poor peasantry became part of the landless labour force in rural areas that included landless labourers, evicted tenants and erstwhile sharecroppers.

The increase in cropping intensity and tight crop rotation increased the demand for labour and its real wages, although relative inequality increased. This gain lasted a few years until the farmers actively challenged it by increasingly mechanising farm operations. Byres (1981) argued that farmers would be willing to pay this ‘political price’ to maintain a certain level of profitability even if mechanisation was not by itself necessary to increase output. In fact, Agarwal (1983) argued that tractors have a neutral effect on output, but mechanisation led to a reduction in the labour time needed in farming. At the same time, Green Revolution technology led to an increase in permanent/attached labour compared to the earlier period, though the terms of attachment changed from *jajmani* (patronage) to more formal contractual relations (Byres 1981; Judge 2001). Over time, migrant labour from states such as Bihar and UP came to dominate both casual and attached labour in the state because they were cheaper and the local labour, most of whom were Dalits in the villages, increasingly avoided farm work (Judge 2001; Jodhka 2002).⁵⁴ Outside agriculture, Dalits are known to be employed as labourers in construction and transport, although in the Doaba region they have had exceptional success in leather trading (Planning Commission 2004; Ram 2004).

⁵⁴ So stark and rapid were these processes of commercialization and differentiation that some opined that the Green Revolution would become the basis of the Red Revolution in Punjab (Frankel 1971; Aggarwal 1973; Byres 1981).

Table 4.3: Percentage of households leasing-in land in Punjab

	2002-03	2012-13
Marginal (less than 1 ha.)	25.69	26.73
Small (1-2 ha.)	17.17	28.56
Semi-medium (2-4 ha.)	30.25	29.96
Medium (4-10 ha.)	38.68	58.07
Large (above 10 ha.)	46.23	69.74
Total	14.76	22.55

Source: Ranganathan 2013

The structural reasons for the Green Revolution technology's differentiated benefits for large and small farmers in its early years also led to the emergence of reverse tenancy as a prominent trend in the state by the 1980s. This gained ascendancy in Punjab because 'optimum utilisation of mechanical inputs and associated economies of large-scale farming' (Brar and Gill 2001, 220) created a demand for land by the former while the increasing inability of smaller farmers to afford the requisite expenditure on capitalized, commercialized farm operations created the supply of land. Table 4.3 shows that while the proportion of households leasing-in land has increased by a small margin for small and marginal farmers, it has increased by 50% among both the medium and large households.⁵⁵ However, in the neighbouring state of Haryana, Jodhka (2014a) argues that despite a trend towards reverse tenancy, land has continued to be leased-in by small farmers who want to supplement their income and/or who are in some ways enterprising and with some risk-taking capacity. Whether this also holds for Punjab needs to be studied empirically.

4.2.3 *Post-Green Revolution*

As mentioned above, the pressures of highly capitalised agriculture squeezed small and marginal farmers out of agriculture. Table 4.4 gives the distribution of operational holdings in Punjab in 2011: the numbers reflect the concentration of landholdings among semi-medium to large farmers. This is completely opposite to the trend in the rest of India where marginal and small farmers dominate the distribution of operational holdings. Further, while elsewhere in the country, the

⁵⁵ Vijay (2012) has shown that in 2002 NCPH in Punjab, i.e. households in the rural sector that own land but do not cultivate it, constituted 44% all non-cultivating households in rural areas but only 8% of land. This indicates that a large proportion of these NCPH are small landholders.

share of marginal landholders has been rising steadily, in Punjab this share has decreased marginally. Given that above it has been argued that small and marginal farmers were squeezed out, the relatively marginal decline in the percentage of marginal and small landholdings could be explained, speculatively, through the overall decline in the number of landholdings and fragmentation of holdings among sons of the same household. Therefore, these broad trends in land distribution reflect many of the problems being experienced by small landholding households in the state, discussed below.

Table 4.4: Percentage share of operational holding categories in Punjab

	Punjab		India	
	1995-96	2010-11	1995-96	2010-11
Marginal (less than 1 ha.)	18.65 (203,876)	15.62 (164,431)	61.58	67.1
Small (1-2 ha.)	16.78 (183,453)	18.57 (195,439)	18.73	17.91
Semi-medium (2-4 ha.)	29.31 (320,340)	30.83 (324,515)	12.34	10.04
Medium (4-10 ha.)	27.98 (305,792)	28.35 (298,451)	6.14	4.25
Large (above 10 ha.)	7.28 (79,612)	6.62 (69,718)	1.22	0.7

Source: Agriculture Census, various years

Note: absolute number of holdings in brackets

The heady growth of the first decade of the Green Revolution had subsided by the end of the 1980s. Table 4.5 gives the decadal growth rates of agriculture in Punjab from 1970 to 2000; it reveals a sharp decline in the 1990s, even falling below the national average. The average annual growth rate between 2007-08 and 2013-14 was 1.3% p.a.⁵⁶ The productivity levels of wheat and paddy, Punjab's chief crops, also stagnated. The compound growth rate of wheat yields declined only marginally between 1970-80 and 1990-2000 – from 2.3% to 2.06% – but the decline was drastic in the case of paddy – from 5.5% to 0.08% (Chand 2008). K. Singh (2009) argues that between 2000-01 and 2005-06 the operational costs of cultivating paddy and wheat increased by over 50%, while over the same period paddy yields increased by only 12% and those of wheat decreased by 8%.

⁵⁶ This figure is derived from the Central Statistics Office (n.d.). It should be taken as suggestive and not necessarily comparable with those in Table 4.5 since the prices against which they have been calculated could be different.

Table 4.5: Decadal growth rates in agriculture in Punjab and India

	1970-71 to 1979-80	1980-81 to 1989-90	1999-91 to 1999-2000
Punjab	4.03	5.33	2.34
India	1.77	3.26	3.33

Source: Chand 2008

The increase in operational costs is a result at least in part of the increased costs of agricultural inputs under liberalisation (discussed earlier). The countrywide increase in costs of fertilizers such as di-ammonium phosphate (DAP) and chemicals such as weedicides has adversely impacted farmers in Punjab as well (ibid.). But in Punjab, high costs of mechanisation have also played a role.

Despite having only around 3% of the net sown area of the country, Punjab has 25% of India's tractor population (Kalkat 2008). The tractor intensity per 1000 ha. of net sown area was found to be over 70 for Punjab compared to a mere 17 for India overall (Lerche 2014). Chand (2008) argues that following the initial years of the Green Revolution, tractors and other machinery were developed that were suitable for smaller plots of land, allowing for the diffusion of mechanisation across smallholdings. The emergence of second-hand tractor markets in the 1990s 'where farmers often sold recently purchased tractors to meet their family needs' has thus been argued to indicate the unviability of tractor purchases by small farms (Kalkat 2008, 70; S.S. Singh 2010). At the same time, many small farmers have to hire in machinery, accounting for over 60% of their operational machine expenses, while the same figure for large farms stands at less than 30% (K. Singh 2009).

Moreover, farmers' irrigation costs have also increased; even though the Punjab government introduced a 100% electricity subsidy for agricultural irrigation in 1997 at the point of use, it very shortly afterwards began to ration the supply of electricity in the peak paddy sowing season – when irrigation requirements are at their highest. Consequently farmers have to pay to operate tube wells through diesel pump sets (Anindita Sarkar and Das 2014).⁵⁷

⁵⁷ The subsidy is, of course, still beneficial for farmers as they had begun making large investments in submersible tube wells and diesel pump sets before the subsidy was introduced (Sarkar and Das 2014).

As a result of the above, profit levels have declined. Wheat profitability has been argued to have declined by 15% from 1999-2000 to 2003-04 (K. Singh 2009), although we know from Kannan (2015) that the profit levels are still much higher than in other states. Gill (2009) has calculated that the MSP in the 1980s and 1990s represented a decline in returns to production of wheat and paddy in real terms. Leaders of farmers' unions such as the Bharatiya Kisan Union (BKU) routinely target the central government for not setting the MSP high enough for farmers to receive adequate remuneration (PTI 2013; *The Tribune* 2016).

Another dimension of the agricultural crisis in Punjab is ecological: the wheat-paddy rotation has caused severe nutrient imbalances and deficiency in the soil (Sidhu et al. 2008; Kalkat 2008). Several scholars have pointed out that the continuous cropping rotation of wheat and paddy has caused severe deterioration of the resource base supporting agriculture. The widespread cultivation of paddy in particular has led to an alarming depletion of groundwater resources since paddy is a water-intensive crop and Punjab is a semi-arid region (Sidhu et al. 2008). Apart from issues of sustainability, this has economic implications for farmers. Depleting groundwater levels force farmers to make continued capital investment in deepening tube wells and, as per an estimate in 2002, the cost of this has been increasing by 7.2% p.a. (K. Singh 2009).

In terms of social relations, it is the relation between the farmer and the trader-moneylender, now in the form of the commission agent or the arhtia that has again emerged as the trope to explain the crisis for Punjab's farmers. Indeed, arhtias control 36% of the total agricultural credit market in the state (S. Singh and Bhogal 2015). This is the focus of the next section.

Here, let us note that indebtedness is also caused by loans taken from institutional or formal sources. Commercial banks and Primary Agricultural Cooperative Societies (PACS) in the state have been the farmers' key sources of institutional credit, with interest rates varying according to the purpose of the loan. The amount of outstanding credit advanced from these sources has been increasing continuously, from 19% of the Net State Domestic Product in 1996-97 to 38% in 2005-06 (K. Singh 2009), yet is still not sufficient to meet farmers' demands. Moreover, banks

and PACS continue to be biased against small and marginal farmers, who are therefore more vulnerable to non-institutional or informal sources.

Based on NSSO data from 2011, Table 4.6 shows the proportion of households across different size-classes with outstanding loans. It does not, however, give the extent of the debt relative to income nor does it categorize the purpose of the loan or its source. This implies that we cannot use these figures to estimate the relative access to or impact of formal and informal sources of credit for different groups of farmers.

Nevertheless, some broad patterns can be observed. Indebtedness among marginal and small farmers in Punjab is lower than but largely comparable to the all-India average, and is significant enough to warrant concern. The figures for semi-medium, medium and large classes are, however, higher than the all-India average, and considerably so for the latter two categories. In the absence of information on the purpose of the loans, the source or the terms of repayment, it is difficult to interpret these figures accurately. Nevertheless, one could expect them to be at least partly reflective of the high levels of capital intensification in Punjab's agriculture.

Table 4.6: Percentage of households with loans outstanding in Punjab and India across different landholding classes

	Punjab	India
Marginal	46.2	63.6
Small	15.9	18.4
Semi-medium	17.9	12.0
Medium	17.6	5.40
Large	2.40	0.60

Source: Directorate of Economics and Statistics 2015

The above discussion establishes that there is a serious 'viability crisis' (Gill 2010) among Punjab's small agricultural households. Many studies have found that such households wish to leave agriculture – and many have already left, a process termed 'depeasantisation': small and marginal holdings declined by 200,000 over the 1990s (K. Singh et al. 2009; S. Singh 2012; S. Singh and Bhogal 2014). Simultaneously, there has been a spate of farmer suicides in the state, especially by small farmers. A 2005 Government of Punjab study reported that 2,116 farmers committed suicide

between the late 1980s and 2005 (K. Singh 2009; A. Gill 2009). These same studies have also stressed the role of the arhtias in the distress of small and marginal households (ibid.; Dandekar and Bhattacharya 2017). We now turn our attention to this.

4.2.4 Indebtedness to Arhtias

In view of the rich historical debate on the role of trader-moneylenders discussed earlier, it is notable that in the decades following Independence, the literature on them suddenly dried up. This can be explained perhaps by the preoccupation of scholarship with the almost revolutionary agrarian transformation of the region due to land reforms and the Green Revolution. However, there is some indication that informal credit continued to be required by farmers across classes due to the increased costs of capitalized agriculture even in the heyday of the Green Revolution. Satish (2006), for example, argues that commercial banks and cooperative societies' share of total credit advanced to farmers increased in the 1970s. Yet, even in 1971-72 informal credit formed well over 50% of the total debt of cultivating households, around 12% of which came from 'traders and commission agents' and just under 6% came from 'professional moneylenders' (2755), which he leaves unexplained. Trader-moneylenders, therefore, continued to be important in the agrarian landscape, even if not the most important credit source.

In the 1970s, market towns were studied from the point of view of town planning and urban development. We know from this literature that regulated markets were created in the late 19th to early 20th century by the colonial authorities and one of their avowed aims was to prevent the exploitation of farmers by traders and moneylenders. The first Punjab APMC Act was passed in 1939. Even in the early 1960s Punjab had one of the largest numbers of regulated markets, a feature it shared with other major cotton producing states (NCAER 1965). We also know that in Punjab, market towns were springing up in large numbers from the late 1960s onwards in order to cope with the increased production of food grains. These towns were located close to or along railway tracks and highways, although not always evenly in all areas (A.J. Singh 1972; Kahlon and Kehal 1972). B. Harriss (1974) also writes that before 1967 (i.e. pre-MSP), there was a significant difference between market prices in larger centres and those in smaller, more remote areas. Further, she informs us that there was limited competition between arhtias in mandis. Despite the

above, it is difficult to find much detailed reference to the operations of arhtias or moneylenders in these market towns, or the nature of credit relations between them and producers for this period. It was not until the 1980s that in-depth scholarship on the role of arhtias in Punjab's agrarian economy appeared.

Studies on traders and arhtias in Punjab in the last two decades or so clearly indicate that it is only since the 1980s that Jat farmers have started diversifying into the *arht* (commission agent) business. The corollary to this is that when the arht business formally began in the 1960s under the Punjab APMC Act of 1961, it was the non-agricultural moneylenders, the erstwhile sahkars, who monopolized this business. This raises the question of why the agriculturalists who were prominent as moneylenders in the late colonial period did not obtain any space in this new business. While there are no indications of this in the literature surveyed, it can be tentatively argued that it was a historical moment whereby the erstwhile sahkars were able to re-assert their control over the commodity and credit markets.

Under the APMC Act, the arhtias are responsible for the sale of farmers' produce in return for a commission. They are responsible not only for selling the crop to the buyer, but also for coordinating loading, unloading, weighing, measuring, cleaning and packing of agricultural produce for which they are also paid 'market charges', partly from the farmer/seller and partly from the buyer (Government of Punjab 1961, 1962). Different sources indicate that there are over 20,000 arhtias in Punjab involved in cereals alone, with around 200-300 in each mandi, and roughly 45,000 overall (Damodaran 2000; PTI 2010; Chand 2012).

So powerful is the collective of arhtias in the state that it has been able to negotiate higher rates of commission for itself over the years: for food grains, it increased from 1.5% in 1990 to 2.5% in 1998. Moreover, while many states have changed their APMC Acts considerably, some argue that the reason Punjab's Act has been amended only marginally so far is the pressure from the arhtias (Damodaran 2000).

Some argue that the commission and market charges add up to an amount entirely undeserved for the actual work done by the arhtias. Moreover, the arhtias pay the farmers for the produce only after they have been paid by the buyer, which makes farmers vulnerable. They also often do not follow their legal obligation to issue farmers with J-forms, the official record of the amount due to the farmer from the

buyer, and so they are also able to manipulate the amount of money they pass on (S. Singh and Bhogal 2015). However, arhtias also function as unregistered moneylenders to farmers. The arhtia lends money to farmers, especially small farmers, for both production and consumption expenses. He does so on the terms that the farmer will repay this amount at harvest time by selling the crop at his shop. This represents a form of interlinked transaction discussed in detail in Section 2.2.2. According to Gill (2004), arhtias charge between 24-36% interest p.a.; S. Singh and Dhaliwal (2011) report a figure of 18-24% p.a. Both estimates are significantly higher than interest rates charged by formal sources. This, more than anything else the arhtia does, is considered a major cause of farmers' distress. Unlike Crow and Murshid's (1994) finding in Bangladesh, there is no study for Punjab that shows that interest rates differ by the farmer's class position. However, A. Gill (2004) argues that 'the rate of interest charged declined (although slightly) as the amount of loan borrowed increased' (3747) across all categories of landownership and this prompted farmers to borrow more, pushing them into severe indebtedness. S. Singh and Bhogal (2015) also argue that the 'dominant and exploitative' (62) role of the arhtia vis-à-vis Punjab's agriculturists is due to the fact that farmers also buy agricultural inputs and domestic supplies from shops 'connected' to the arhtias.⁵⁸

In order to curb this all-encompassing power of the arhtias, in 2009 the government introduced a provision that farmers were free to sell their produce not only through the arhtia, but also directly to the FCI or to any other buyer. However, this has been a complete failure so far since the choice is a non-existent one for farmers who need credit and are dependent on the arhtia for the same (Damodaran and Srivats 2004; S. Singh and Dhaliwal 2011).

While the above is the standard and dominant narrative for the intractability of the arhtias' power over farmers, a close reading of the literature also throws up other insights that prompt a closer investigation of the nature of farmer-arhtia relations in the state. S. Singh and Dhaliwal (2011), for example, mention that some large farmers are able to negotiate a part of the commission received by the arhtia from the government. This indicates that different classes of farmers participate in the market

⁵⁸ It is not clear from the text though if 'connected' means that arhtias also derive a profit from the same. If 'connected' simply means 'by reference', then it is not good enough evidence because all businesses work through references.

on different terms, as discussed earlier. While S. Singh and Bhogal (2015) focus all their attention on the arhtias' credit, their own data shows that institutional sources account for over 50% of credit taken across different classes of farmers.

Finally, an important observation was made by Bell and Srinivasan (1989) in their comparative study on interlinked transactions in Punjab, AP and Bihar. They argue that credit-tenancy transactions need to be differentiated from credit-marketing ones. To quote them at length:

... the emphasis on credit-tenancy interlinkages in the theoretical literature is misplaced. In the principal-agent models of that literature, only output is risky, and all decisions are made before the state of nature is revealed. In the case of a loan tied to the marketing of output, however, price risk cannot be ignored. Moreover, the farmer learns the size of the crop before its price — unless he has sold the crop forward. This structure of uncertainty yields several options. It is not uncommon for standing crops to be sold in advance of the harvest, so that all subsequent risks are borne by the trader. Far more frequently, however, farmers decide when to sell after the harvest is in. In this case, commission events will often provide storage facilities to those of their clients who have rejected current offers and expect to do better by waiting. Commission agent and client both share in price risk in this arrangement. The analysis of these contractual possibilities calls for a more complicated and subtle intertemporal structure than that employed in the extant theoretical literature on interlinking. (82-83)

In other words, both arhtia and farmer have to bear a price risk contingent on both the volume of the produce and market prices at the time of harvest. This, according to the authors, creates diverse possibilities for the terms of the credit relation between the farmer and the trader or commission agent. So while Punjab has been provocatively termed the 'loan bowl' of India (Gill 2009), it appears that the terms of these loans are different for different classes of farmers. This resonates with the differentiated credit relations described by Bhattacharya (1983) in the colonial period (discussed above).

Moreover, much of the foregoing literature on Punjab, as well as other states, has focused on food grains. Yet, markets for other crops exist and need to be explored, not least to understand how their market structures impact the profitability of non-wheat/paddy crops for farmers. In the case of cotton, for example, S. Singh and Dhaliwal (2011) show that in the absence of an effective MSP, cotton farmers are severely exploited by the arhtias. Brar and Gill (2001) have written about the 'potato

kings' (very large resource-rich farmers-cum-traders), who dominate the seed potato market in the Doaba region of Punjab. Sidhu et al. (2010) discuss different modes of marketing by onion and cauliflower farmers, albeit from the perspective of 'market efficiency'.

Before moving on to the final section, I would also like to highlight that even though there has been a burgeoning literature on arhtias in Punjab, capitalism in the state continues to be understood in terms of the farm alone without integrating the role of agro-commercial classes. The latter are still implicitly assumed to be external to agrarian capitalism. But given how integral arhtias are to agriculture in the state, this is a major shortcoming in the analysis.

4.2.5 Beyond Crisis?

Despite the larger narrative of crisis, there are some signs of dynamism in the economy. The previous section showed that large farmers have greater autonomy from the arhtias than small farmers. There is also growing evidence of diversification among farmers: their entry into the commission agent business has already been mentioned. Farmers from Punjab have also made land purchases in other states and even in other countries such as Ethiopia, Ukraine and Georgia, although not always successfully (Lerche 2014; Chaba 2015a; Kaushal 2015).

In Chapter 4, it was mentioned that diversification by Jat farmers was constrained by the power of the mercantile castes. Arvinder Singh (2006) argues that this was caused by the 'peculiarly "communal" organisation' (204) of Punjab's economy where the Sikh Jat farmers dominated the rural areas and the Hindu Mahajans the urban. However, Damodaran (2008) argues that such a constraint is prevalent across the entire 'Jatland' which includes Punjab and Haryana. The same pattern is replicated, or even worse, where the Jats are Hindu. Therefore A. Singh's argument about the role of religion is overstated at best.

S. Singh (2005) has researched contract farming of crops such as potatoes, tomatoes and chillies by large companies including PepsiCo, HLL, Nijjer Agro and Markfed. Singh shows how the large, diversified farmers fare better in these contracts than smaller ones. There is also evidence of large, 'progressive' farmers who have diversified into high-value vegetables using certified production technology (Sidhu

et al. 2010; S. Kaur 2011). These represent relatively under-researched markets and spaces of accumulation for capitalist farmers.

An earlier section noted that Jat farmers continue to accumulate through political manoeuvring (Martin 2015). In fact, large farmers in Punjab are the leaders of most of the farmers' unions in the state, many of them factions of the BKU. Until the 1980s, the unions had a wider developmental agenda which included issues of corruption, ecological degradation and experiments with agro-processing through farmer cooperatives, in addition to the dominant agenda of input and output prices and procurement of paddy and wheat from the mandis. By the 1990s, the BKU had limited its concern to prices and procurement. In fact, the power of the large and middle farmers has been argued to be crucial to ensuring an increase in the MSP even under liberalisation (Kaur et al. 2007). The unions rarely take issues of indebtedness among farmers seriously, something that would benefit small and marginal farmers considerably (Gill 2010). On the contrary, as mentioned above, farmers' unions have succeeded in getting land ceilings relaxed, a clear indication of their class interests. Collective action is, therefore, instrumental for successful accumulation by capitalist farmers.

The evidence presented above, although patchy, indicates that large farmers are exercising various options towards an expanded basis of accumulation. That they are also politically consolidated is bound to feed into this process. So while there is very real distress in the countryside, especially for small and marginal farmers and the landless, one is forced to consider whether it is the same for capitalist farmers. There is a huge gap in the literature in terms of understanding the process of accumulation in Punjab's countryside and this research aims to fill this gap. How changes under liberalisation feed into this process is especially pertinent.

4.3 Conclusion to Part I

This part of the thesis explored various empirical and theoretical dimensions of studying agrarian accumulation. It established that capitalist agriculture in the 21st century includes not only the activities and relations on the farm but also a wide set of important activities upstream and downstream. In other words, production is also shaped by relations of exchange and processes of circulation outside the farm. It

therefore becomes necessary to study both farmers and traders of various kinds in order to understand agrarian accumulation.

The case studied in this research, Punjab, is without doubt the scene of capitalist agriculture. The analytical framework, therefore, is developed in relation to this context. Liberalisation, on the other hand, is viewed here as a different phase and paradigm of development rather than, as is often the case, a proxy for increased corporate control alone. Therefore, in this study liberalisation is evaluated in terms of its impact on the wider socio-economic ecosystem that shapes agricultural production and marketing.

I have argued that there is evidence to suggest that capitalist farmers in India are not in crisis and that they continue to accumulate. The discussion on tenancy and reverse tenancy indicates that land continues to be an important factor in generating profits in agriculture, especially, but not only, in the case of Punjab. However, it is not self-evident if this is simply an issue of scale or relates to other factors such as cropping profile, nature of markets, levels of mechanisation, etc.

There is also a need to further investigate how accumulation within agriculture links to accumulation outside of it. I have established that non-farm diversification is linked in complex, non-linear ways to agriculture. In other words, in this research, there is no assumption about diversification being a consequence of either the channelling of surplus profits or a sign of distress. So, while the focus of this study is on accumulation within agriculture, patterns of diversification need to be accounted for.

I have also argued that agrarian accumulation is shaped by the terms of engagement of farmers with traders. One should be wary of applying the term 'merchant's capital' to any market-linked activity and assuming that the role of such capital will be unproductive and exploitative. The role of traders and moneylenders has to be examined empirically and situated within the wider class structure of a given society, while their compulsions independent of agriculture also need to be factored in. Evidence from different regions, including Punjab, and across different historical periods indicates that merchant-moneylenders cannot always prevent rich farmers from accumulating. Interlinked transactions, a dominant theme in the literature, are also similarly understood in socially contingent ways. In the case of Punjab, these

questions should be raised not only with respect to the engagement of farmers with arhtias but also with other kinds of agro-commercial classes.

Further, in view of the overwhelming focus on credit advanced by arhtias, it should be recognized that formal sources of credit continue to be important, albeit in different ways in the post-liberalisation era compared to the heyday of the Green Revolution. Given the significance of credit for capital-intensive agriculture, it is important that the ground realities of credit systems and networks are examined.

In the post-liberalisation context, there is a need to evaluate the role of corporate agribusinesses as well. But here too, as in the case of traders, their role has been examined in context-specific ways. While not discounting the evident structural power of corporate capital – domestic and transnational, the question of whether corporate presence has been oppressive for all farmers, especially capitalist farmers, or an opportunity for agrarian capital is seen as an empirical one. Assuming otherwise undermines the agency of the farmers in shaping the conditions of their livelihood.

I have argued that the interplay between farmers, traders and corporate capital is likely to be shaped by the class position of the farmers and the structure and politics of the market, as well as the nature of the commodity. The social value of a commodity and its agronomic features are often crucial to the relations that develop around its production and exchange. This is not to fetishize the commodity but to view it as one of many angles through which the question of accumulation can be understood. In this context, most farmers in Punjab engage in multi-cropping and therefore, a better understanding of accumulation strategies requires an understanding of how they negotiate relations around different crops.

A study of the interaction between these three internally differentiated social actors, i.e. farmers, traders and corporate capital, would also facilitate an understanding of the forces that constitute and shape agrarian capitalism in India today. It raises the issue of whether farmers and traders comprise a combined rural dominant class and forces us to think about the ways in which their interests may converge and diverge. It also raises the important question of tensions between local and corporate capital, i.e. whether they are in conflict or cooperating, and if so, how. In general, it needs to

be recognized that agrarian capital, merchant's capital and corporate capital co-exist and the nature of their interaction is socially and historically contingent.

The role of the State is, needless to say, another important axis of analysis. The policies and priorities of the colonial and the post-colonial State have been foundational for the emergence of Punjab as India's most developed agricultural state. If and how this role has changed in the period of liberalisation is crucial to understanding the conditions that frame agrarian accumulation and in anticipating the trajectory of agrarian change in the state. At the same time, it has been pointed out that working through a State-market dichotomy is not useful; the State often frames the conditions of the market and may be invested in it in various ways.

Finally, it has been argued that the view of a generalized agrarian crisis needs to be challenged. Agrarian distress exists, but it exists disproportionately among the small and marginal farmers, and landless workers. This does not mean that capitalist farmers are not challenged by the new conditions under liberalisation that they need to negotiate in order to thrive. However, there is rarely any empirical and class-based analytical investigation of how they do so and to what effect. This then is fundamentally what this research is about and what the following chapters explore.

Part II Research Methodology

Chapter 5. Methodology: Approach and Challenges

Part I of the thesis set the agenda and the theoretical contours of this research. I argued that understanding agrarian accumulation requires that historical and region-specific aspects be taken into account. Liberalisation, too, needs to be evaluated, both in terms of its constituent elements as well as its overarching logic (even though this may never be fully consistent). Part II moves on to a discussion of the methodological design involved in studying these different elements and the complex interactions between them. The first section discusses the methodological approach of this research, including selection of the field site and methods used. The second discusses the fieldwork experiences and challenges.

5.1 Fieldwork Methodology

5.1.1 Putting the Problem into Practice

The main research question for this study is: *How has agrarian accumulation in Punjab been reconfigured by liberalisation of the Indian economy?* The research aims to understand whether and if so, to what extent liberalisation has altered the patterns of agrarian accumulation in Punjab. The corollary, of course, is that there could be processes giving shape to accumulation patterns that are unrelated to liberalisation, and these would be included in the final analysis of the research problem. This is, then, an explanatory study (Sumner and Tribe 2008, 103) which asks how liberalisation is causing accumulation to change (but does not explain neoliberalism *per se*). Framing the question in this way allows us to be open to the possibility that accumulation may or may not be continuing (even though the literature indicates the former) and to explore why patterns of accumulation may be changing in particular ways.

Towards putting this question into practice, this research has disaggregated specific lines of enquiry represented by its four sub-questions:

- i. Is accumulation within agriculture continuing?

Answering this question requires evidence on whether agricultural profits can still be made, by evaluating costs and returns. Information on whether farmers are investing in expansion within agriculture and/or outside it would also be instructive. The question also involves studying factors that might be undermining such profits and investments.

- ii. Which liberalisation reforms introduced by the State are having an impact on accumulation?

The discussion so far has shown that relevant reforms include those around land and credit, allowances for corporate involvement in aspects of agricultural production and marketing, and aspects of the overall policy priorities of the economy, such as export-orientation and declining State support. The objective is not simply to identify which reforms matter, but also to understand whether and how these different reforms manifest in the field. This implies partly looking for evidence of these reforms in the field but also being alert to other aspects that may not be included in the literature surveyed.

- iii. Which social relations matter for accumulation, and how are they changing vis-à-vis liberalisation?

The research relies on a political economy framework and sees accumulation as a relational process. The crucial relations being studied are those between farmers and traders. These are researched across commodities and multiple levels of the market structure. Other social relations, such as labour relations and relations between different kinds of farmers, are not the focus but are explored in some detail where relevant. Overall, this requires mapping of the realms of production and of marketing, and some understanding of how these relations have evolved over time.

- iv. How are different kinds of capitalist farmers negotiating these changes?

This question is about exploring how capitalist farmers are negotiating the new forces and processes at play in pursuit of continued accumulation. Studying this involves recognition of two issues: firstly, the reforms' interaction with the existing local political economy; and secondly, different classes of farmers and kinds of capitalist farmers would negotiate this situation differently. The research identifies different kinds of capitalist farmers, on the basis of landholdings, crops produced, and diversification portfolio. Further, it acknowledges that strategies of accumulation

can be both individual and collective. However, I have mainly studied individual trajectories of economic performance. Collective action is described when it has appeared in the empirical data but has not been studied systematically.

Having identified the key elements of this research problem in terms of empirical investigation, the following section describes the study's methodological approach.

5.1.2 Methodological Approach

This research assumes that 'reality' is objective and independent of the researcher, but the researcher's perceptions of it are subjective and contingent (Sumner and Tribe 2008; Bryman 2016). This then raises the question of epistemology, i.e. how can this reality be known?

As a researcher, I recognize that in some ways, what we try to know through social research is what we already know. Most researchers approach the field with some assumptions about the problem at hand, irrespective of whether it is in the form of a hypothesis or not. These assumptions are informed by the theoretical framework adopted. At the same time, the assumptions need not be deterministic. Drawing on Burawoy's conceptualisation of 'reflexive science', I believe that prior assumptions are, and need to be, in constant 'dialogue' (1998, 16) with both the participants and, more broadly, the field location where the research is being conducted. I work with Burawoy's assertion that when social reality is understood as defined both contextually and through relations of power, reflexive science is the paradigm better suited to 'highlighting the ethnographic worlds of the local' (ibid., 30).

Research Design

The research is designed as a case study.⁵⁹ The understanding of a case study is inspired by the following definition: 'a case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident' (Yin 2008, 19). It is, therefore, well-suited to studying contemporary events and explanatory questions, the use of different kinds of evidence together and the use of theory for developing the research design (Yin 2008).

⁵⁹ Yin (2008) describes case study as a research *method* while others (e.g. Bryman (2016)) describe it as a research *design*. I have chosen the latter since it better captures the research's overall framework.

A common criticism of case studies is that the findings are not generalizable. However, while case study analysis may not be ‘statistically generalizable’, i.e. extendable to the entire population, it is amenable to ‘analytic generalization’, i.e. ‘in which a previously developed theory is used as a template with which to compare the empirical results of the case study’ (ibid., 38). Case study analysis contributes to the theoretical problematic set up by the research, in this case the pattern of agrarian accumulation under a changed development context. The analytical value of such a case study can also be gauged through the lens of what Burawoy terms the ‘integrative or vertical approach’ (1998, 19). This means that the case can be compared with other similar ones to draw conclusions about the wider, ‘extralocal’ social forces.⁶⁰

Finally, we come to the question of disciplinary constitution of this research. Development Studies in general involves a cross-disciplinary approach to the study of specific issues, and there are many ways in which different disciplines may be combined (Sumner and Tribe 2008). This research is ‘problem oriented’ (ibid., 66) and does not consciously seek to engage with issues of cross-disciplinarity. Guided by the theoretical framework of critical agrarian political economy, it draws on studies conducted within diverse disciplines and methodological approaches to analyse the research problem. However, it does not attempt to resolve the conflictual methodological assumptions they might bring.

5.1.3 Identifying the Fieldwork Site

In a case study, a crucial element is to identify the unit of analysis. As Section 5.1 explains, this research project deliberately sought out different kinds of economic actors as well as spheres and processes of economic activity. It required simultaneous mapping of the farm and field, among other spaces, and sought to uncover relations at multiple spatial levels. This meant that both villages and market towns be included in the field site. However, it was not self-evident how best that could be done.

Previous studies that explored issues of rural accumulation or market dynamics have also included both farms and markets in their analysis but have tended to privilege the latter. For instance, Krishnamurthy (2011) wrote an ethnography of a single

⁶⁰ In this research, such forces would be the nature of the State or the forces embodied by neoliberalism.

mandi, while Harriss-White (1996, 2008) and Crow (1989) focused on market relations and networks. On the other hand, studies on agriculturalists (e.g. Ramachandran et al. 2010; Münster 2015) have focused on farm and village level dynamics to the neglect of the sphere of exchange, as discussed in Chapter 2. The challenge for this research was to keep the farmers in focus while also studying the relations between them and traders. The following sections describe how I resolved this.

Here it should also be noted that the significance of State-led procurement of food grains in Punjab meant that I would also need to study the State. Scholars such as Mooij (1999) and Sud (2012) have studied explicitly the nature of the State at the national or sub-national levels or the politics of policy-making. I have studied it peripherally, as a ‘black box’ (Mooij 1999, 323) and to the extent that its policies and officials impacted accumulation strategies. This was considered adequate as this research was concerned with how policies served (or not) the interest of agrarian capital, and not with how the policies were formed. That well-off farmers have political weight is taken for granted based on the literature (Section 4.2.5). However, this means that that this research is limited in its analysis of the State in agriculture.

Preliminary Selection

Since this project studies accumulation in a context of well-developed capitalist agriculture, I decided to focus on the most capitalized pocket of the state of Punjab. To that end, I ranked all the districts in the state on pattern of landholdings, average yields for paddy, wheat and some other major crops, cropping intensity, irrigation and mechanisation using data obtained from government sources (Appendix I). I prioritised rankings on yield, mechanisation and cropping



Figure 5.1: Map of Punjab, preliminary selection

intensity over those on landholding pattern in selecting potential sites, but the selection coincided with districts that had a relatively high proportion of large and medium landholdings. Since data is available for 20-22 districts for each indicator, high ranking was determined as ranked 1 to 8 as this would capture roughly the top third in any category.

Most of the districts in the northern part of the state (Majha and Bist Doab regions) were ranked relatively average or low in terms of these criteria and, therefore, were not considered as potential fieldwork locations. In the Malwa region, districts in the south-west (pre-division Firozpur, Muktsar and Bhatinda) had the highest proportion of large and medium operational landholdings in the entire state. However, these districts displayed relatively average or low yields, levels of mechanisation and cropping intensity and so were also deemed as not being amongst the most capitalized in agricultural terms. Six districts have relatively high rankings in all or most of these criteria: Moga, Sangrur, Barnala, Ludhiana, Patiala and Fatehgarh Sahib (Table 5.1). Interestingly, all these districts form a contiguous pocket of land in the central and south-east part of Punjab (Figure 5.1).⁶¹

Table 5.1: Ranking of Punjab districts for preliminary selection

	Large & Medium operational landholdings (%)	Cropping Intensity (%)	Rice yield (kg/ha.)	Wheat yield (kg/ha.)	Tractors per 1000 ha. Net Area Sown	Net Irrigated Area to Net Sown (%)
Moga	31.01	193	4360	5460	97	100
Sangrur	30.11	198	4335	5494	94	100
Ludhiana	42.23	199	4257	5375	96	100
Barnala	42.7	210	4374	5346	71	100
Patiala	38.33	197	3861	5472	89	99.9
Fatehgarh Sahib	38.85	183	4234	5285	109	100

Source: Government of Punjab 2012b

Scoping

I then undertook a scoping exercise of potential fieldwork locations. On this basis, the most relevant location was selected as the fieldwork site.

⁶¹ Source of map: www.mapsofindia.com

In the absence of secondary information on different locations, I selected three locations based on discussions with academics, journalists and agribusiness professionals working on Punjab and based in Chandigarh and Delhi. These three locations were: Moga in Moga district, Khanna in Ludhiana district and Dhuri in Sangrur district. I spent four to five days visiting each, meeting farmers and traders to discuss broad issues around farming, mandis and agriculture-related industries in the local town and villages and any major economic, social and political changes in the recent past.

While these locations had many common features, they were also unique in important ways in the context of my research. Each of them had mandis which were among the largest centres of wheat and paddy arrival in the state.⁶² Land rates were said to be on the higher side within the state, though in Dhuri it was lower than in Moga and Khanna. The latter two also had a more vibrant agro-industrial and crop profile than Dhuri. Since the focus of this research is capital and its strategies for accumulation, it was important to choose a location that was economically as robust as possible. On this basis, Khanna was chosen: it was the most economically vibrant and had the widest range of crops and industries marking its terrain. As a fieldwork site, it was found to be the ‘critical case’, i.e. ‘the site that would yield the most information [for the research problem] and have the greatest impact on the development of knowledge’ (Patton 2001, 236-237). It was also convenient logistically; of the three scoping locations, I found it relatively easier to arrange accommodation, find an interpreter and travel in the area around Khanna.

The Field and the Case

The ‘Khanna area’ is both my field and my case. It is the field where I conducted an intensive case study of my research problem, i.e. exploring the interface of agrarian accumulation and liberalisation. Bryman (2016) writes that location may or may not be of analytical significance in a case study. In the case of this research, the significance of the location revealed itself during the scoping exercise, as seen above. The case for this project, therefore, has been defined both geographically and analytically, and in some ways, emerged *through* the process of fieldwork itself. Before starting fieldwork, the plan was that the final fieldwork site would include

⁶² Crop arrival refers to the amount of a given crop that is available for sale in a mandi.

one or two villages connected to one mandi and any other related market spaces or towns. These boundaries had to be redefined in significant ways in the course of fieldwork, especially in the way the villages were incorporated in the study.

The first few months were spent mapping issues around farming and agricultural trading in the area. Firstly, it emerged that there were two mandis in Khanna itself – one for food grains (grain mandi) and one for fruit and vegetables (sabzi mandi). However, it seemed that their significance for farmers in the area differed; the former was more important and this meant that I engaged with the traders in the grain mandi more and in different ways compared with those in the sabzi mandi (discussed below). There were many other units, such as mills of different kinds and cold stores, in the area that could also be understood as market spaces, or at least important nodes of the market networks. However, these were geographically distant from the mandis and also quite dispersed. In the case of both food grains and, more so, vegetables, many such relevant market spaces were located outside the Khanna area, sometimes as far as Ludhiana, Jalandhar, Chandigarh and even Delhi. Interviewees were sought across different spaces and locations both within the Khanna area and outside.

In the first few months, I interviewed farmers in over a dozen villages around Khanna town in order to select one or two for a village-based study of farming and farmers. However, I had difficulty gaining suitable access and support in all of them, especially in terms of residence (discussed below). At the same time, through mapping done over several weeks, it emerged that varying crop cycles are an important marker of the different accumulation strategies of capitalist farmers. Different pockets of villages around Khanna had slightly varied cropping patterns of around four to five different types. Choosing one or two villages for in-depth study would have meant that I would study only some cropping patterns and not others. Instead, I decided to focus on large capitalist farmers in four different villages in these different pockets so that I could capture the dynamics of production and marketing for four major crops, namely, wheat, paddy, potato and cauliflower.

These crops were chosen because they were the most widely grown in the area, allowing for the possibility of capturing both the general picture of agrarian accumulation and the diversity within it. At the same time, choosing four different

villages enabled me to study the multiple accumulation strategies in the area in a relatively more comprehensive manner. These strategies, however, precluded a thorough study of other aspects, such as village dynamics and petty producers. It also means that I have less in-depth material about the full trading chain of each crop.

By doing this, I was able to survey in some detail a much larger canvas and paint a complex picture of the different kinds of agricultural activities of different farmers. The trade-off was that village-based accumulation strategies were harder to capture – for example, the use of village-level politics for advancing economic interests. But since the diversity within accumulation strategies was a key issue for the project, this seemed to be the most effective choice. Ultimately, the core of my field and my case emerged as the market spaces in Khanna and farmers in four surrounding villages. The case was, therefore, an amalgamation of different actors, spaces, networks and processes of analytical interest. Figure 5.2 shows the various locations where some fieldwork was conducted and Figure 5.3 shows the core fieldwork site.⁶³

⁶³ Source of maps for Figure 5.2 and 5.3 are www.punjab-state.com and www.onefivenine.com, respectively.



Figure 5.2: Map of fieldwork locations (Khanna marked as the main point)



Figure 5.3: Map of core fieldwork sites; V1-V4, the selected survey villages

5.1.4 Methods of Data Collection

This research used a combination of qualitative and quantitative methods, although the former was predominant. Whilst acknowledging the debate about whether and how ‘mixed methods’ can be used, I used these two methods together on ‘technical’ grounds (Bryman 2012), i.e. as useful tools to get a more comprehensive understanding of the subject of study.

Use of qualitative methods over several months was deemed necessary in order to capture the changing dynamics associated with the seasonality of agricultural production and exchange, and issues of power, history, and agency. In the case of traders, qualitative interaction was important to get an understanding of both ‘publicly acknowledged principles of operation’ and ‘unacknowledged practice’ in agricultural markets (Crow 1989, 200). At the same time, quantitative data was important, both for an overall profile of the households and for certain aspects of production and exchange.

Semi-structured interviews were the most widely used method during fieldwork. Interviews were treated as ‘sites of knowledge construction’ (Mason 2002, 202), i.e. spaces where ideas about the relevant issues took form through a dialogue between the researcher and the interviewee. Such interviews were conducted with different kinds of traders, farmers, government employees, agribusiness firm employees and journalists. The nature of the questions and content of the interviews varied considerably, not only by respondent but also according to the stage of fieldwork and nature of data sought at the time. Some lead questions tailored around specific phenomena and personal life and work experiences were used to streamline the interviews while also allowing respondents to share their experiences and understanding of those themes. Different kinds of interviewees were asked about each other in order to get varying perspectives on the same issue, and assess the reliability/congruity of their views.

The respondents were not only quite diverse but also geographically dispersed and difficult to meet. Nevertheless, some key respondents were cultivated among the farmers, traders and government employees with whom I conducted multiple interviews. Multiple interviews were more common with farmers and traders in the grain market than with any other kind of trader. A major reason was that traders in

the grain mandi were more crucial to the central issues of this research. The sabzi mandi was not as nodal to the farmers who cultivated vegetables in the area as the grain mandi was for farmers who cultivated grains. Moreover, some trading firms (e.g. rice mills, feed mills, cold stores, and various agribusiness companies) were not based in mandis, but had to be sought out elsewhere, whether in Khanna or different villages or cities. Consequently, often I could only conduct one long interview that needed to be focused and carefully planned, with its attendant pros and cons.

I also conducted **work history** interviews with over a dozen key respondents among traders in the grain markets. These interviews tried to capture the kind of work done by men in the family at least two generations before the respondent and, depending on the age of the respondent, at least one generation after. The purpose of this was to establish the kind of change in accumulation strategies of traders across generations, and gain a sense of the constraints and opportunities they had experienced. While the responses were uneven, this was helpful in understanding the way the market was structured independently of farming, which could then be used to frame the ways in which market processes influenced (or not) accumulation within agriculture.

Household surveys were conducted with farmers in the four villages chosen for this purpose. The pre-fieldwork designed survey questionnaire was revised based on information gathered through the first four months of mapping. The revised questionnaire was used with two farmers and further minor amendments were then made. The sample of 93 farmers was constructed purposively and through snowballing. Table 3.2 records the number of farmers included in the survey across different villages. While the sample is not representative of villages as a whole or all farmers within these villages, it is certainly so of the large farmers in these villages. The survey recorded age, work and education details of household members; land owned and operated upon; cropping patterns, details on cost, yield and prices of different crops; labour employed and terms of employment; non-agricultural income sources; recent major expenses and credit sources (Appendix II). Time and situation permitting, I asked follow-up questions based on the information given or any other relevant issue that, in my assessment, the respondent could tell me more about.

A major challenge in conducting the survey was that many farmers were not sure about how much they were spending on different crops per acre and some simply

asked me to write what other respondents before them had said. As a result, I have used the figures given by a few farmers (cross-checked for variations) as representative for everyone. Moreover, even farmers who gave figures of costs and average yield per acre gave a range or averages. This was partly because they did not want to divulge exact information and partly because they felt that it would not be useful – every year *something* leads to a fall or rise in costs, for example, late rainfall for paddy, shortage of urea for the rabi crop, fluctuation in diesel prices, labour shortages, etc. Therefore, the analysis in subsequent chapters depends on such estimates of costs and yield per acre. In the case of crop prices, paddy and wheat have an MSP; for all other crops, prices fluctuate widely. Here again, I have relied on a range reported by and cross-checked with different respondents (farmers, traders and others). This means that the cost figures must be taken as approximate.

This is then a survey method of estimating costs rather than a cost accounting method. The latter would have required estimating costs before sowing and at regular intervals (Surjit 2017) which was not feasible within the broader research design. The survey method certainly involves problems of recall and therefore, estimating average costs across many farmers was found to be a suitable strategy. Despite these rough figures, the breakdown of costs is important because it allows us to identify the cost- and labour-intensive components, and makes clear the various aspects of production side that need to be managed by the farmer to earn a profit. However, these average estimates have not been calibrated against the class position of the farmers, and this is a limitation. The literature indicates that small farmers have higher per unit costs than larger farmers, especially due to hiring costs of land or machines (Ramachandran et al. 2010; K. Singh 2009).

The estimates are also not directly comparable with the CACP estimates for a few reasons. Firstly, they do not neatly follow the CACP's break-up of input costs even for its most basic cost estimate, Cost A1 which is 'all actual expenses in cash and kind incurred in production by owner' (CACP 2014) without including rents, interest and imputed costs. Secondly, I have not included imputed costs of owned land or family labour in the estimates. Imputed costs can be useful for macro-level comparisons. However, scholars have pointed to the problems in using and

estimating such costs (Surjit 2017; Ramachandran et al. 2010).⁶⁴ Additionally, such costs may also be less relevant in particular contexts. In this case, family labour was more akin to managerial work than labouring work. Further, these farmers were unlikely to undertake labouring work elsewhere were they not involved in agriculture, so the opportunity cost argument underlying the concept of imputed cost for farmers' work in agriculture is less relevant. For land, the alternatives would be either to sell it or lease it out. The decision on whether to do this is calibrated against whether non-agricultural investments or jobs would be more rewarding than tilling one's own land, or if younger male household members are unwilling to work in agriculture. The answer to this is not self-evident (discussed in Chapters 8 and 10). It should also be noted that CACP estimates costs per hectare while my estimates are per acre as that is the unit used by farmers locally.

Beyond the above, there is no reason to expect that my calculations are especially skewed. The purpose of calculating approximate costs was to contribute to an understanding of general processes that lie behind strategies of agrarian accumulation, not to arrive at exact numbers.

Finally, it should be noted that the survey did not explore the role of women in the household's accumulation strategies and almost all respondents were male heads of households. This is among the limitations of this study, not least in view of the research done by scholars such as Harriss-White (2003) on this.

Through all the above, **non-participant unstructured observations** were also recorded. I have borrowed this term from Bryman (2012, 273) to refer to observation of people, places and situations without immersing myself in the social setting. I observed procurement operations, lean seasons and relevant political demonstrations in the mandi. In villages, notes were made on the spatial organisation of the village, house and living standards of farmers, and the activities observed on the farms that I visited. Finally, I also sought any relevant **secondary documents** that could complement the information I was gathering through the aforementioned methods, such as government records and reports, as well as Punjabi newspapers that reported extensively on local issues.

⁶⁴ Ramachandran et al. (2010) also do not include imputed costs in their detailed study of costs and profitability for farmers in AP, although the Indian Left supports the inclusion of imputed costs in the calculation of MSP in principle (see Ramakumar 2018).

In the next section I reflect on the experience of doing fieldwork, both in terms of putting the research problem into practice and my subjectivity.

5.2 Reflections on Fieldwork Experience

‘High-quality DS [Development Studies] research is usually concerned with levels of probability rather than of certainty, which requires subjectivity-awareness and control rather than absolute objectivity, and for approximate truth rather [than] absolute ‘closure’ (Sumner and Tribe 2008, 70-71). This statement highlights the necessarily tentative nature of social research and thereby forces us to consider the challenges and limits of each research. I have divided these reflections on challenges and experiences into three: translating theory to fieldwork; researcher’s subjectivity; and the ethics of research and representation.

5.2.1 From Theory to the Field

This chapter began with a deconstruction of the research problem and the different lines of enquiry within it. However, it did not make explicit the methodological challenges in putting into practice the theoretical framework outlined in Part I, which is the purpose of this section.

Studying Agriculture *à la* Bernstein

One of the key theoretical pillars of this research is that agriculture includes activities and actors upstream and downstream of production. This implies, as mentioned earlier, that both farms and markets had to be studied. However, given that farms can be extremely diverse and markets immensely complex, there was a challenge in defining the boundaries of fieldwork. The fact that this research explicitly seeks to show diversity within patterns of agrarian accumulation compounds this challenge. This approach precluded certain research strategies. For example, ethnographies of different economic spaces are not feasible in such a study and arguably that would have been a different research project. Similarly, since I chose to study multiple commodities, it was not feasible to study the full commodity chain of each. As a result, I mapped the broad patterns of production and exchange but followed them in detail only when it seemed that they would have a direct bearing on farmers, the focus of this research. Further, as discussed above, there were issues around building rapport and arranging meetings with different kinds of traders due to geographical dispersion.

Many of my respondents – farmers and traders – were extremely mobile; a farmer, for example, might be in his village, in Khanna or in another city, all on business of one kind or another. One exception apart, I was unable to accompany my respondents across different locations both due to the way the research was designed and the absence of such a rapport. In such a situation, for both locations I visited, and those that I could not, the crucial issue was to understand what kind of economic significance these places held in the trading networks I was studying, and their relation to relevant processes located in Khanna. In the case of some respondents, it was also important to reflect on the social and political importance of the different locations they were travelling to. Interviews with key respondents were also crucial in providing insights into some of these issues.

The challenge of being constantly between different locations was negotiated partly by following the local news. As much small town economy in Punjab revolves around agriculture-related activities, local editions of Punjabi newspapers commonly reported on these issues. I often found out about important developments through them and then followed up with different respondents.

In moving between different locations, a choice was also made regarding the use of an interpreter. Initially, I struggled to understand the Punjabi spoken in the villages, and employed an interpreter, a young, married Dalit woman and former social worker. Even when I no longer needed her translation skills, I needed the company on my visits to the villages for greater social acceptability. However, I did not employ her for my visits to traders. Since they are city-based, most of them spoke some Hindi – my native language – and I had a basic knowledge of Punjabi. I decided, therefore, that I could do without the intermediation that the use of an interpreter inevitably brings.

Studying the multiple dimensions of contemporary capitalist agriculture requires the researcher to move constantly between places and issues, and therefore, necessarily between different research strategies. The predicament is perhaps best represented in the words of Mooij (1999, 337-38) writing in the context of her research on state intervention in agricultural markets in India. I quote her at some length here due to its resonance with my fieldwork experience:

...it is not easy to classify the fieldwork methodology. Perhaps the best way is to describe it as a combination of the intensive method of the anthropologist and the rapid rural appraisal as practised by some students of development...However, where an anthropologist is interested in the whole life-world of the other, I had a very specific, restricted topic in mind, which, moreover, brought me to many different settings, and different locations... Different methodologies are combined; it all depends on what you want to know and the possibilities you have. However, where the rapid rural appraisal is very rapid and geared towards intervention, I tried to get deeper into the matter.

Defining Accumulation and Accumulators

The second major challenge lay in applying the concept of accumulation itself. Accumulation refers to the appropriation of surplus value from the labour process and the expansion of capital through continuous re-investment. It is, therefore, necessarily a relational process. In Part II I discussed the various aspects that determine accumulation. However, methodologically, how can we determine that accumulation is *happening*? Based on the review of the long-standing literature on Punjab's agrarian capitalism, this research accepted that where labour is being employed for agricultural work, irrespective of the terms and conditions, surplus appropriation by farmers would be taking place and the relations are capitalist. To be sure, data on the terms and conditions of employment of agricultural labour across various commodities was collected. But the extent of appropriation it implies has not been quantified, nor has the nature of labour relations been examined through interaction with labourers.

Expansion of capital, on the other hand, has been studied indirectly through an understanding of agricultural profits, non-agricultural diversification and investment in machinery. Through the surveys and interviews with farmers, I drew estimates of per acre profits from the different commodities included in this study. This, along with the information on the operational landholdings, indebtedness and nature of non-agricultural diversification, if any, of the household was brought together for a sense of the broad patterns of accumulation, i.e. to establish what kind of strategies seem to lead to accumulation and what makes them possible. It could perhaps be argued that the occurrence of 'accumulation' should have been established at the household level. However, given the constraints of time and resources, this would have had to be a heavily quantitative exercise *at the expense* of an understanding of

processual and contextual issues. I did not make this trade-off as the latter are crucial to establishing the causalities that this research sought to identify.

It should be added that my focus is on capital accumulation through exploitation of labour and productive investment within agriculture by farmers. Accumulation may also take place through unproductive channels such as rent, interest and speculative activity. While it is valuable to study these, within the limits of doctoral research, I have focused on capital accumulation from agriculture by those who are engaged in farming (and not all landowners) as it is a central aspect of agrarian change. Ramachandran et al. (2010) also argue that data collection on these income sources is often subject to 'concealment and misreporting' (72) and do not study these. Within a capitalist economy, accumulation may also be driven by relative profit in other sectors. But this would require a deeper analysis of the economy as a whole which is beyond the scope of this research. A wide range of, albeit not all, non-agricultural income sources are discussed qualitatively in Chapter 10 to highlight the possibilities of diversification.

The approach taken here, however, does not eliminate the need to identify who the accumulators are, i.e. it is necessary to identify different classes of farmers for this research. But identifying different classes or seeking patterns of class differentiation can itself be the objective of a dissertation. Differentiation is, of course, closely linked to the process of accumulation, but the two are also, in an abstract sense, distinct. I chose to focus on the latter in this research and this raised the issue of identifying the strategies of capitalist farmers without first systematically identifying who these farmers are. It was unavoidable that these categories would have to be consolidated through the process of fieldwork for the core research problem.

Through the mapping processes, it emerged that land was a crucial determining factor in the apparent prosperity of some farmers. In interviews, 10 acres was often pitched as the dividing line between those who were agriculturally prosperous and those who struggled. Part I argued that land size cannot be the defining element of scale or class position, yet some studies have shown that there is a positive correlation between operational landholding and capital intensification (Section 3.1). Patnaik (1972) also argues that when techniques of cultivation become uniform, size may be a close approximate of scale. In my field area, I found such uniformity to a

great extent (Section 10.7), perhaps because this is a context well beyond the moment of transition.

Therefore, with an awareness of both the theoretical clarity and the empirical ambiguity about this, I proceeded with using 10 acres as an ad hoc basis for identifying large capitalist farmers in the farmer household survey, while also creating a smaller sample of households with lower operational landholdings. This allowed for a perspective on a whole cross-section of landed households and the possibility of comparing attributes across them. At the same time, care was taken to include questions on levels of mechanisation, labour use and non-farm diversification in order to reflect on class attributes beyond land (in the manner of Oya (2004), but much less systematically).

Households with less than 10 acres of land were not, however, treated as a single category. Households with less than 5 acres were found to be considerably different to others in terms of their choice of commodity mix, ownership of machines, credit and nature of diversification and they were generally more impoverished. Nevertheless, as they are integrated into commodity relations, they have been categorized as ‘petty producers’ (Bernstein 1988; Lerche 2013). Those with holdings between 5 and 10 acres lay somewhere in between but appeared to have more resources than petty producers and were more able and willing to take risks, albeit on more uncertain terms than large capitalists. I categorized them as ‘small capitalist’ farmers.

To further clarify, I view petty producers and capitalist farmers (small and large) as separate classes. This distinction rests on the fact that the latter are less likely to perform manual labour and make capital investments within agriculture (Section 10.7). A further distinction has been made between small and large capitalists in order to highlight the significance of scale economies for possibilities of agrarian accumulation.

Table 5.2 gives the survey sample disaggregated by these categories.⁶⁵ Needless to say, each category has both exceptional and extreme cases. However, these

⁶⁵ These categories happened to correspond to the government’s size classes for cultivating households. Petty producers correspond to small and marginal households; small capitalists to semi-medium households; and large capitalist to medium and large households.

categories work as heuristic devices that help us decipher patterns and processes of agrarian accumulation. It should also be noted that since operational holdings could change annually (see Chapter 8), any effort towards establishing patterns of class differentiation in this region that involves land as a criterion can only be tentative unless a longitudinal perspective is integrated into it.

Comparing the survey sample in Table 5.2 with the distribution of households across different landholding groups in Punjab in Table 4.4, it is obvious that this sample is not representative of all landholding households in the state. The sample was created purposively and through snowballing in order to have a greater proportion of large capitalist farmers, a relatively under-researched group within Punjab’s agriculture. Therefore, as stated earlier, this research can make claims about large capitalists with greater certainty than about households in other categories. At the same time, I had tried to create a larger sample for petty producers than what is presented here. But I was repeatedly told that there are very few ‘very small farmers’ (petty producers) in these villages. Whether this was indeed the case, I have not been able to verify. However, if so, it could be a reflection of the tendency towards reverse tenancy noted in Chapters 3 and 4. Section 2.1.2 argued that some petty producers may also be accumulating and a large sample of petty producers would have been instructive in this regard.

Table 5.2: Farmer household survey sample

	No. of Households	%
Land leased-out	5	5.4
Petty producers (under 5 acres/2.02 ha.)	16	17.2
Small capitalist (5 – 9.9 acres/2.02 – 4 ha.)	13	14
Large capitalist (10 acres/4.01 ha. or more)	59	63.4
Total	93	100

5.2.2 *Researcher’s Subjectivity*

The fieldwork possibilities were also shaped, and adversely impacted, by my gendered, racialized and caste-laden subjectivity. The mandi in Punjab is an overwhelmingly masculine space, as is that of agricultural operations and related decision-making. All my key respondents, farmers and traders, were male. It was not possible to do fieldwork at ‘unsafe’ hours and I was constantly reminded by people

of the same. Traders, for example, often sat together in the evenings, meeting over alcohol and food, a space I could not access. Often farmers would leave as soon as the survey was completed and make way for the women of the household to entertain me. As a result, other than with the key respondents, interactions with farmers were sometimes too time-bound and forced me to constantly think on my feet in order to make the interactions as useful as possible.

Gender was also one of the reasons why the way the household survey was conducted was altered. Even though I met many sympathetic and resourceful farmers, nobody was willing to arrange for me to stay in their village. I was told repeatedly, '*mahaul kharaab hai*' (the times are bad), the implied meaning of which was times are unsafe for women. But it was also the case that nobody wanted to vouch for a young, unmarried, Indian woman whose work was to roam around public spaces – anathema to a patriarchal and parochial 'village society', if I may. Farmers were also reluctant to personally introduce me to others. I was repeatedly given mobile numbers to contact and was told to use their name as reference. It was challenging to arrange meetings in this way since most farmers were wary of trusting a stranger on the phone.

Many appointments with traders also had to be made in the same way. Perhaps this can be thought of as a modality of doing fieldwork with elites, in this case, the rural elite. It was less of a problem with arhtias in the grain mandi since they have open offices that I could use to meet respondents once I had been introduced, either personally or by giving someone's reference over the phone. Since I spent more time in the grain mandi, I also gained greater visibility and acceptability there.

Harriss-White (1999, 349) has written that cultivating trust among elite respondents can be an issue for any researcher owing to the 'widespread legitimacy of commercial suspicion'. Indeed, even after many months of my research, I was often suspected of being a journalist, an intelligence agent or a tax inspector, and few readily accepted that I studied at a university in London. In fact, it was because of these trust issues that at no stage of the research were any interviews recorded.

'Field workers need to be particularly sensitive to their own gender, with its implications both for where they cannot safely tread without offence, and also for where they can exploit it to gain access and information' (Robson 1999, 295).

Indeed, while my gender was a constraint in many ways, it also worked to my advantage. Once the ice was broken with traders and farmers, many respondents were eager to help me as some of them came to think of me as a kind of helpless young girl (*'bechaari'*) trying to complete a degree. Some also compared me to their own young daughters who were studying either locally or in nearby cities. That I spoke fluent English and was city-bred and educated was also a source of some curiosity. My life and education, especially in 'the West', was a common topic of conversation with respondents, and sometimes enabled me to gain their trust. Such conversations were also revealing in terms of respondents' values and aspirations.

Finally, as an Indian researcher, subjectivity can never be complete without addressing the issue of caste. My caste was commonly brought up by traders but very rarely by farmers. I was often asked whether I was 'high' or 'low' caste. Since I belong to an upper caste community in Bihar which vaguely parallels the mercantile castes of Punjab, they found it easier to approve of me. Overall, while there were elements of my subjectivity as a researcher that worked against me, as usually happens, there were others that presented opportunities I could use to further my investigation.

5.2.3 Ethics of Research and Representation

Breman (1985) and Cramer et al. (2016) write about the complex politics of research on labour in developing country contexts. This research is different since it focuses on and, in fact, privileges accumulation in its narratives of agrarian change. This raises some important ethical and political issues.

Firstly, it could be said that such a project risks neglecting the voices of agrarian distress in developing an understanding of agrarian change. However, far from being a blind spot, it is a requirement of the research problem as defined to place greater emphasis on narratives of accumulation. My contention is that in doing so, it can create an understanding of the axes of social and economic power that, while allowing for accumulation, simultaneously disempower the classes suffering distress. Therefore, such a focus allows us to nuance the understanding of crisis beyond sweeping explanations of neoliberalism and corporatisation.

The second issue is raised by the fact of researching the rich and the prosperous. How can the researcher act towards and represent with integrity respondents who

are, by the terms of the theoretical framework, ‘exploiters’? Can the researcher ‘speak with’ the respondents, as Sumner and Tribe (2008, 45) suggest? I believe that I acted ethically towards my respondents. Names of farmers and traders, their firms, and their villages have been anonymised. Names of agribusiness companies have been left unchanged since most of their strategies are common knowledge in the field. During the process of fieldwork, the points of view of all respondents were taken seriously, including the challenges they faced in their work, and were cross-checked with other respondents in the same group (farmer, trader, and agribusiness) and with each other. Similarly, their responses and points of views have been received and represented as class interests rather than personal views; however, that such class analysis itself might implicate them in certain kinds of social processes is unavoidable. Overall, the research does not claim to ‘‘know’ what is ‘good’’ (ibid., 44) for the context under study; it simply analyses issues of structure and agency in the processes of agrarian change in the region within a certain historical framework.

5.3 Anticipating the Evidence

This chapter outlined the key methodological assumptions of this research, the considerations in designing the research as a case study, and the challenges experienced in conducting the fieldwork. The following chapters present the empirical evidence gathered.

The chapters on different commodities focus on both production and marketing. Production covers capital intensity, labour process, costs of production, and any changes in these in recent years. But since less is known about how production and market interact, the discussion on market and traders for each commodity will be more in-depth. These chapters will show that potato and cauliflower are potentially more profitable than paddy and wheat. However, the latter are crucial to accumulation because of the guaranteed MSP provided by the State, although there are strains this system is experiencing under liberalisation. This kind of support also makes these crops financially safer for farmers across classes. Potato and cauliflower, on the other hand, are much riskier as they are more cost-intensive, their markets are extremely complex and their prices volatile. The production of these crops is, therefore, specific to capitalist farmers, especially large capitalists. Notably,

the expansion of these crops as a basis for accumulation in the fieldwork area is clearly linked to changes in the economy as a result of liberalisation.

Chapter 8 shows that the dynamics around land-leasing are crucial to accumulation. Land-leasing allows for expansion of the scale of production which is likely to facilitate higher profits. On the other hand, lease rates can be prohibitively high and create cycles of indebtedness. Land can also be an asset in terms of sale and purchase, but this is linked to developments in the wider economy and can only be used profitably by some of the larger capitalist farmers.

In Chapter 9, formal and informal credit relations are shown to add another layer in determining the possibilities of accumulation through negotiation of production, marketing and land relations. Arhtias are the main source of informal credit, with their power based on both inadequate formal credit and guaranteed State procurement of wheat and paddy from the mandis. Smaller farmers are more vulnerable to them than larger capitalists. Moreover, the reconfiguration of formal agricultural credit under liberalisation has actually created some space for the latter to function independently of the arhtias.

Finally, I will discuss the strategies used by different farmers to have a source of income beyond farming. Agricultural businesses were found to be easier to diversify into than non-agricultural ones. Education afforded some opportunities for obtaining public or private jobs. Overall, however, success was uneven and many attempts at diversification failed. This is an important reason for aspiration to migrate abroad, although success in this also requires finances and networks. Significantly, the difficulties in diversification are also a statement on the state's economy.

Part III: Empirical Data

Chapter 6. Khanna: An Introduction

Part III presents the empirical data gathered as part of the research. This chapter gives an overview of the field site, i.e. Khanna and the villages around it, drawing on secondary sources and my observations. It paints a broad picture of the socio-economic, spatial and political canvas of this area against which the specific processes of agrarian accumulation are analysed.

6.1 Khanna Town

Khanna is located near the south-eastern border of Ludhiana district. It covers an area of 32km² and has a population of around 130,000. It is the headquarters of one of the six *tehsils* or blocks in Ludhiana district (Ludhiana District Administration n.d.).

Its strategic location makes it an important economic centre – it is located on National Highway (NH) 1 and is also connected by rail. Khanna is only 45km from Ludhiana, the industrial centre of Punjab, and just over 65km from the state capital of Chandigarh. It has connecting roads to other smaller but important towns in the area, namely, Samrala, Doraha, Sahnewal (Ludhiana district), Amloh, Sirhind, Mandi Gobindgarh (Fatehgarh Sahib district) and Malerkotla (Sangrur district).

The town was created as a *sarai* or resting place on the Grand Trunk Road by the ruler Sher Shah Suri in the mid-16th century and was governed as part of the Mughal Empire until its decline in the late 17th century. Subsequently, it was ruled by Sikh *jathedars* or military commanders until the mid-19th century. In 1850, Khanna and its surrounding areas lapsed to British rule when the last ruler, Daya Kaur, died heirless. In 1868, Khanna was a small settlement with a population of 3,408 (Punjab Urban Development Authority (PUDA) 2011). Table 6.1 gives some of the main landmarks in Khanna's history.

When I first visited Khanna, I noticed that the NH1 that cuts across the town was bustling with vehicular traffic, markets, and people on foot, although there is no infrastructure for walking. Despite the traffic, there is not a single functional traffic

light in the entire town. Overall, it seemed much busier than both the other towns I had previously visited and those that I visited after. Despite this, it was compact and intimate in a way only small towns are.

Table 6.1: Landmarks in the development of Khanna town

Landmark	Year
Railway line (Ludhiana to Khanna)	1870
Grain market	1906
Khanna as sub-tehsil headquarter in Tehsil Samrala	1947
Electricity	1955
Electric grid	1976
Water supply network	1978
Sewerage network	1980-83
Telephone network	1984

Source: PUDA 2011

A tea vendor, a migrant from Odisha, who I visited frequently, once praised Khanna by saying, ‘Khanna is neither a city, nor is it a village’. This statement captures the predicament of the town well. On the one hand, there are city-like qualities, markets bigger than the closest towns, industries, government and private schools and colleges, and even modern housing complexes and shopping malls have emerged in recent years. Khanna is often described by those in smaller neighbouring towns such as Amloh, Doraha and Samrala as a ‘*bada shahr*’ (big city). On the other hand, only 3-4km in any direction from the centre of the town will see you in a village, and the town and village(s) seem to flow into each other quite seamlessly. Yet, this fluidity itself gives a unique character to Khanna (and others like it). As an intermediate town, Khanna represents both what has been achieved and what is still aspired to in terms of ideals of well-being and development.⁶⁶

6.2 History of Agriculture in Khanna

When approaching Khanna from Ludhiana, the grain mandi appears on the left and it is hard to miss given its sheer expanse, only a part of which is visible from the highway. Like the rest of the state, the town is surrounded by vast stretches of lush fields throughout the year. A historical understanding of this area in particular is

⁶⁶ The proliferation of small towns in India has been described in recent scholarship as ‘subaltern urbanisation’ (Denis et al 2012; Harriss-White 2016a).

available through population studies done on Khanna and the surrounding areas. *The Khanna Study* was conducted between 1953 and 1960, with a brief follow-up study in 1969 (Wyon and Gordon 1971). Mamdani (1972) and Nag and Kak (1984) both conducted further demographic studies in one of the villages (Manupur) included in *The Khanna Study*. Historical information on agricultural markets in Khanna has been drawn primarily from two sources, Cummings Jr. (1968) and B. Harriss (1974).

Between 1954 and 1960, agriculture and village-based residence characterized the socio-economic landscape in the area. One of my elderly farmer respondents reminisced, 'Earlier, only groundnuts were sold. We were only able to grow enough wheat for our family's use. Those were very difficult days.' Single-room mud houses were common in the villages at this time and agricultural land was irrigated using the old leather-bucket system (Mamdani 1972, 57) or Persian wheels driven by draught animals. Women were confined to managing the household, male children were preferred and caste-based occupations were adhered to. 'Many exchanges of services between persons of different castes were characteristically hereditary and without cash payment' (Wyon and Gordon 1971, 102). This is presumably a reference to attached labour conditions, among other kinds of caste-based exploitation.

At the same time, 'at the time of study a considerable traffic existed between village and local market towns. Appreciable numbers of men had acquired experience with the outside world through residence in cities or by military service' (ibid., 100). In fact, military service was found to be equally common among all caste groups in the villages. Education has also been argued to be a stimulant for emigration, although this was a predominantly male phenomenon. Even in 1956, each of the eleven villages included in the study had at least one school. Women migrated mainly for marriage or as dependents.

In the brief re-study in 1969, the most striking change was found in the village economy. This is unsurprising since these were the early years of the Green Revolution. Here it is worth quoting the authors at some length to give a sense of the sea change that took place.

Between 1960 and 1969 the land area cultivated in the study villages remained virtually constant. Acreage sown to wheat more than doubled, however, and to maize almost as much. The smaller crops of sugar cane and peanuts increased, while cultivation of cotton

decreased and that of lentils (gram) virtually disappeared. Fodder crops and fallow land decreased sharply, presumably a consequence of the growing replacement of draft animals by motor tractors, of increased irrigation from tube wells, and the use of chemical fertilizers. Sandy tracts, formerly suited only as grazing land in winter and for peanut cultivation in summer, now produced wheat in addition to peanuts. Thanks to mechanized ploughing, land used for cotton was cleared during September and October in time to sow wheat. (ibid., 304)

Of Manupur village, Mamdani (1972, 61) wrote:

Most of the wells that had been used to draw drinking or cleaning water fell into disuse; instead, every house began to have its own hand waterpump. By 1970, there was not one farmer who did not use chemical fertilizers. Animal manure was now used only as a supplement. Farmers who had for many years used a handcutter to make fodder for cattle now found it desirable to save both their time and labor by investing in a mechanical chaffcutter.

As prices of some crops increased, land prices followed: 'By 1969 the price of land had increased four times, from about 1000 rupees per acre in 1960. Top quality land in ideal locations brought 20,000 rupees per acre at the time of the survey' (Wyon and Gordon 1971, 305). In Manupur in 1970, 'the cheapest land in the village was 3,500 rupees per acre' (Mamdani 1972, 80). At the same time, land in UP cost as little as Rs 800 per acre; this, and limited capital and family labour, led many small farmers from Manupur to move to UP. Small farmers who did not have enough sons old enough to help on the farm also often leased-out their land.

Wyon and Gordon argued that by 1960, farmers were already doing more managerial work on their farms than labour, although this might have been truer of larger farmers than smaller ones, and Mamdani's study indicates the same. Share-cropping and the *jajmani* system were in decline, while the demand for labour had increased (Wyon and Gordon 1971). However, Mamdani (1972) argued that in Manupur, it was only in the labour-intensive seasons of farming that there was a shortage of labour. At other times, the predominantly SC labouring class of the village was underemployed.

It is well known that farmers, especially large farmers, benefitted considerably from the Green Revolution. In the Khanna area, 'the income of landholders had increased four times between 1960 and 1969' (Wyon and Gordon 1971, 306). There was an

increase in domestic possessions such as domestic water pumps, bicycles, radios and sewing machines among the farming families and to a lesser extent, among the labouring families. ‘An improved standard of living, the augmented social status arising from more expensive marriage functions, and comfortable housing stand out as central aspirations’ (ibid., 309). Mamdani (1972) argued that 17 acres was the minimum landholding required by a farming household to succeed decisively in the enterprise. In Manupur, the average landholding among the 14 households that had 17 or more acres was 26.3 acres. For medium landholding farmers, he argued that farmers needed large families to augment farm labour to be profitable. In other words, except for the wealthiest and largest-landed households, large families were required to succeed in farming. However, evidence suggests that by the 1980s this assessment was no longer valid.

Nag and Kak (1984) reported that Jat farmers now used a combination of mechanisation and migrant labour for agriculture. While school-going children helped with some farm and livestock-related work, many activities that children had previously engaged in disappeared or became redundant under the new pattern of agriculture; e.g. disappearance of grazing, use of chemicals for killing weeds rather than manual weeding, and the widespread cultivation of paddy which was argued by the authors to be less labour-intensive than cotton or maize.⁶⁷ As adults, sons were considered less reliable as a source of old-age support than when Mamdani did his study. The authors also found a clear aspiration among parents of all castes for their children to be educated.

On mechanisation, they wrote:

Only 6.6 percent of Manupur farmers owned tractors in 1970... Farm incomes, however, have increased so rapidly since 1970 and the tractor has become such an important implement that at the time of our visit, despite a steep rise in tractor prices, about 39 percent of farmers owned a tractor; a few even owned two... The main reasons why many more farmers owning medium-sized plots could own tractors in 1982 are that the income of all farmers increased considerably since 1970 and so did the number of credit facilities. The use of tractors is no longer confined to their owners. Unforeseen by Mamdani in 1970, a number of farmers with small and medium-sized holdings in Manupur rent tractors from their owners, often for less than it would cost to maintain bullocks. (ibid., 672-673)

⁶⁷ Other sources indicate that paddy is more labour-intensive than maize (FICCI and KPMG 2015).

On credit, Mamdani (1972) argued that the Brahmin moneylenders constituted the most powerful class in the village until institutional credit became available to farmers due to the credit arrangements of the Green Revolution period. Brahmins became marginal to the dynamic agricultural economy of the 1960s and 1970s. In other words, institutional credit freed farmers from material and thereby social domination by the moneylenders. However, he did not account for the Mahajan trader-moneylenders discussed in Chapter 4. As I argued earlier, existing narratives of either the complete removal of moneylenders or their blanket exploitation in the wake of the Green Revolution are incomplete.

6.2.1 Khanna and its Agricultural Markets

In 1970, Khanna had an estimated population of around 20,000 (Mamdani 1972). Based on a study in 1963-64, Cummings Jr. wrote, 'It [Khanna] ranks as one of the largest arrivals markets (35,000 tons of wheat in 1962-63). Over 90 percent of this wheat is shipped out to other markets' (1968, 688). These other markets included Ludhiana, Abohar, Patiala, Barnala Patiala (within Punjab), Karnal (erstwhile Punjab, now Haryana), Agra, Hapur (UP) and Delhi. B. Harriss (1974) adds Mumbai, Ahmedabad and Bengaluru to this list.

Cummings Jr. found that 40-50% of the wheat produced in the Khanna area was marketed and brought to the wholesale wheat markets by the farmers themselves. Wheat started arriving in the wholesale markets by late April, peaking in May and June, and ending in August/September. 'Rail dispatches indicate that shipments go from Khanna to practically every state in India. Stocks in the hands of traders from the previous year appear to be completely gone by the time the following harvest is marketed' (689).

Why the MSP introduced in the 1960s proved to be a game-changer not only for the fortunes of the farmers in this area but Punjab more generally can be explained if one considers the nature of purely private trade that existed in the period before. On prices, Cummings Jr. wrote:

...there is considerable random variability in day-to-day and week-to-week price changes. For example, during the six years for which data were available, changes in modal prices from one Friday to the next exceeded Re. 1.00 per quintal almost one-third of the time. This variability is greatest during the winter, when small arrivals and insect infestation reduce the quotable volumes to very small amounts. ...

The lowest seasonal wheat prices occur during the peak marketing months of May and June. Prices hold fairly steady through September and then rise through January or February.' (ibid., 688-690)

While the author does not provide any data on prices, it can be speculated that farmers would have experienced extreme volatility in the prices obtained and smaller farmers would have been more affected by this.

At the time of his study, there were 90-100 arhtias in the market and 8-10 *pucca arhtias*. Pucca arhtias differ from arhtias in that they do not mediate between the farmer and the buyer, but make purchases on their own behalf or on behalf of other persons/firms in exchange for a commission. Cummings Jr. argued that finance was less of an entry barrier into the latter than skills of the trade. However, unlike the dominance of the arhtias that we observe in wheat markets today, at that time they seem to have been dominated by the pucca arhtia. Cummings Jr. described their activities:

The resident trader's [pucca arhtia] first preference is to purchase wheat on commission for nonresident buyers. The resident trader spends up to two months during the preharvest period soliciting purchase orders from markets in other states... Orders are telegraphed or mailed to Khanna and are filled if they are competitive; if not, the bidder is advised to resubmit his order at a higher price...

The resident trader also purchases some wheat on his own account for three primary reasons: (a) To provide for local consumption in Khanna, an assured market of 5 to 10 percent of total arrivals. (b) To hold against future needs... (c) To sell on consignment in Delhi or other nearby consuming centers.

For the immediate postharvest period, the resident trader has reliable information both for his local market area and for the rest of India on (a) wheat production and (b) market arrivals during the current period... The resident trader is less certain of projecting the supply and demand conditions for the winter months. (ibid., 690-691)

In the late 1960s, new wheat collection centres were built by the State in order to cope with the increased production resulting from the Green Revolution's success; 29 new markets, 76 sub-yards and 47 village procurement centres were established across the state. B. Harriss (1974, 63) reported, 'Khanna, for example, has five sub-centres dealing with 20 per cent of the primary wholesale transactions of the tributary area, although all the produce finds its way to Khanna for immediate export or for storage there'. During this time, the flourishing mandi was the core around

which other retail and service industries (e.g. shops selling daily provisions, construction materials and electrical items) expanded (ibid.; Andrade and Johnson 1972).

Despite the all-important role played by the pucca arhtias until the early 1960s, with the advent of the new mandis, they seemed to have disappeared from the market within a matter of years: in 1968, there were no pucca arhtias for wheat in the Khanna mandi (B. Harriss 1974). This raises two important issues. First, how did the erstwhile pucca arhtias adapt to such a radical change in the trading pattern? This is an interesting but particular historical question that this research is not equipped to answer. Secondly, this development points to the issue of what drives changes in market systems and determines the kinds of traders that exist and dominate. The same Punjab APMC Act 1961 was applicable when Cummings Jr. and B. Harriss conducted their studies, but the pattern of the trade in Khanna was completely different. The role of the State seems to be a crucial element in this case as the State took the place of the pucca arhtias in procuring, storing and transporting grain.⁶⁸

6.3 Present Agro-Commercial Landscape

We now move from a historical survey of the field area to a more contemporary one, drawing on my fieldwork. As mentioned in Chapter 5, Khanna has two agricultural wholesale markets – a grain mandi and a sabzi mandi. The mandis are described in detail below. In addition to the mandis, the town also has a vibrant agro-industrial scene with, as shown in Figure 6.1 (p. 131), an industrial centre (‘Focal Point’) in the south-east of the town. There are also agro-industrial units in some of the surrounding villages, on what was previously farm land. The major agro-industrial units include 55 rice mills,⁶⁹ 8 flour mills,⁷⁰ 43 feed mills,⁷¹ 4 solvex plants,⁷² 2 cold stores⁷³ and a number of agricultural machinery manufacturing units.

According to mill owners, in the 1980s Khanna was the biggest centre for feed mills in north India. Now, however, such centres have emerged in Rajasthan as well. The

⁶⁸ However, this cannot be the only reason as in the same year B. Harriss (1974) also reports that Bhatinda had a glut of pucca arhtias and Adampur and Mansa of arhtias.

⁶⁹ Procurement agency list of operational rice mills in the area in 2014-15.

⁷⁰ Anaj Mandi Arhti Association Khanna, Trade Directory.

⁷¹ Ibid.

⁷² Interview with broker-cum-mill owner; it is not certain whether this figure is for the Khanna administrative area per se.

⁷³ <http://agmarknet.gov.in/MarketProfile/displayformdetails.aspx> (profile updated 6 Sep, 2016).

first feed mill in Khanna started in the early 1980s, nine more followed by the end of the decade. The town continues to host some large cattle and poultry feed mills, including those belonging to major brands like Godrej and Verka. A major private sugar mill is located on one of the town's arterial roads although it falls within the administrative area of the neighbouring district, Fatehgarh Sahib. One of Punjab's major private dairy brands, Super, has a mill in Khanna. Punjab Markfed, one of Asia's largest cooperative federations, has its oil industry in the town since 1971.

6.3.1 The Mandis

Grain Mandi

The grain mandi that exists today is actually the 'new' grain mandi. The original mandi was established in 1906 in the erstwhile village of Khanna Kalan and in what is now the centre of the town. At the time, many Mahajans based in villages opened shops in the market independently or in partnership, buying wheat, cotton and groundnuts from the villages to trade in the market. In 1966, the mandi was relocated to the present location as the space was grossly inadequate for the increased grain arrivals following the success of the Green Revolution programmes. The government was selling the arhtia shops in the new mandi in 1967-68 for Rs 5,000 each, which prompted many of the existing traders in the original mandi and other traders, shopkeepers and moneylenders in villages to move to the present mandi.

At the time of fieldwork, the mandi had four sub-yards in villages in the Khanna area for the collection of paddy and wheat during the harvest season. Figure 6.2 (p. 132) shows the broad spatial organisation of the main grain mandi in Khanna. The offices of the Market Committee as well as those of other state level procurement agencies (discussed in Chapter 7) are located in this mandi. The office of the FCI is across the road from the mandi. There were 253 shops in the mandi affiliated to the Arhtia Association of Khanna, which in turn is affiliated to the Punjab Arhtia Association. The association represents both arhtias and pucca arhtias, so while the overwhelming majority of its 253 members are arhtias, not all are. The mandi also has shops of grain brokers. Some firms had a portfolio combining two or more of these activities. Arhtias in the grain mandi are both Mahajan and Jat Sikh. All the trading firms in the mandi belong to traders from Khanna or nearby villages and towns. Among those who operate from Khanna, I have interacted with owners and/or employees of 16 arht firms, 4 rice mills, 2 flour mills, 2 brokers, 2 solvex plants and 1 feed mill.

Given the importance of Khanna as a grain market, the mandi is extremely busy during the harvest seasons of paddy (late September to mid-December) and wheat (April). During this time, arhtias work long hours and the mandis are thronged with farmers, state officials and mill representatives while its internal roads are jammed by trucks and tractor-trolleys carrying grain in or out of the mandi. Even though auction yards have been depicted at specific places on the map, in reality auctions take place in any open empty space and arhtias' offices are packed with farmers waiting for their grain to be cleaned, dried or auctioned. On the other hand, during the lean seasons (for example between January and March), the mandi appears abandoned; there is very little grain of any kind present and it is in this emptiness that one realizes its expanse. Arhtias come to their office late in the day, if at all, and time is spent visiting each other in their shops.

One aspect that remains constant throughout the year, however, is visits by farmers who come to the arhtias for credit. As mentioned in Chapter 4, arhtias in the grain market are the chief source of informal credit for farmers and their offices are organized accordingly. Most are divided into outer and inner sections. The outer part is usually quite plain, with cotton mattresses and a floor-level desk where most of the monetary transactions between farmers and arhtias (or their accountants) take place. Some shops may also have a regular desk and chair in this part for the accountant to work at; there may also be some plastic chairs for farmers to sit on. The inner parts of these shops are more akin to proper offices, with large desks and chairs, air conditioning and a television. Some arhtias would spend a substantial amount of time in the outer part of their shop, interacting with farmers and other traders who might be visiting them, but others would spend more time in their inner office. The latter was more common when the arhtia also had other parallel businesses, such as rice mills, to deal with and therefore, had less time to deal with individual farmers, but it could also be simply due to personal preferences.

Sabzi Mandi

Technically, the sabzi mandi is a sub-yard of the main Khanna mandi (where grain is traded) and has a small Market Committee office (Figure 6.3, p. 133). However, so different are the dynamics of this space that it qualifies as an independent system. Until the mid-1980s, trade in the sabzi mandi was mainly in fruit; as fruit is not grown locally in Khanna, it used to come then, as it does now, mainly pre-ordered

from Delhi by the arhtias. It was only in mid-1980s that farmers in the area started growing vegetables and bringing them to the mandi. There are roughly 50 arhtias in this mandi and they have a separate association from the grain mandi arhtias. Approximately 60% of the arhtias deal only in vegetables while the rest deal in fruit. Only one or two agents in the mandi deal in both as they rely on different kinds of trading networks for sale. The fruit trade is mainly channelled through Delhi, Himachal Pradesh, Jammu and Kashmir while in the vegetable trade a lot of work is done locally or through other mandis within Punjab such as Ludhiana, Chandigarh or Jalandhar. In Khanna sabzi mandi, I have interacted with 4 arhtias. I have also interacted with 3 cold store owners serving farmers in the area, although their stores are not listed under the Khanna Market Committee.

The arhtias in the sabzi mandi usually sell to smaller retailers/petty vendors (*rediwallahs*) on credit, and the debt is repaid by these vendors on the third or fourth day. Once the produce auction is over, the mandi is lined with these smaller vendors. It is said that sometimes these vendors, who are mostly from Bihar and UP, do not repay the debt before returning to their village, and in this way money is lost. One must appreciate what this says about the position of the Khanna sabzi mandi vis-à-vis others. It is smaller than those in Ludhiana, Jalandhar and Chandigarh because the population it caters to is much smaller. Unlike grains which can be stored before processing, fruit and vegetables are meant for daily consumption; population size, therefore, regulates the size of the mandi and the scale of operations taking place. Storage, and indeed hoarding, takes place but not all fruit and vegetables can be stored away like onions and potatoes. In fact, this is also why many farmers insist that potato farming is not the same as vegetable farming. In bigger mandis, the arhtias sell to intermediary traders who then sell to these petty vendors. As one Market Committee official said, ‘the arhtias in Khanna mandi are like retailers and the ones in Ludhiana mandi are like wholesalers’. He added that the best quality products were not available in smaller mandis such as Khanna.

The arhtias take 5% commission on fruit and vegetable sales and the market fee is 4%. The revenue from market fees in Khanna has been increasing steadily for the past 15 years or so. However, the sense is that this will not continue for much longer as new sabzi mandis have been built in nearby cities, diverting product which previously came to Khanna mandi. Moreover, the neighbouring town of Mandi

Gobindgarh, the Steel Town or *Loha Mandi* of India, has suffered major losses due to what is described as faulty industrial policy by the state government and so demand has fallen as people's purchasing power has declined. Furthermore, the fact that large quantities of cauliflower and potatoes are purchased directly from farmers by traders from other states means that the market fee is charged at the destination mandi and not at the local mandi.

With respect to social composition, it is notable that the arhtias in the sabzi mandi are not the Mahajan arhtias of the grain mandi. Apart from a handful of Jat arhtias dealing in vegetables and a few Bihari arhtias dealing in fruit, the sabzi mandi arhtias are what are popularly known as 'Bahawalpurias', i.e. they belong to the erstwhile princely state of Bahawalpur which is now in Pakistan. These Hindu traders, mostly belonging to the Arora caste, migrated during and after Partition. The Model Towns in various cities of Punjab, as well as in other states, were made for the resettlement of these and other refugees/returnees. Having lost much of their property and capital in Pakistan, many members of this community became petty fruit/vegetable vendors as this did not require much initial investment; gradually some of them became successful enough to become arhtias. The other major business in which they are involved in Khanna is the scrap business. Due to the difference in their language and customs, the 'Bahawalpurias' are looked down on by the local Mahajans and Jats alike as uncultured, filthy and qualifying as neither Hindu, Muslim nor Sikh. Perhaps because of envy, they are said to have made a lot of money through deceptive trade practices; however, they are also recognized as immensely hard-working and enterprising.

The nature of work in the two mandis is very different. While the grain mandi business is seasonal, in the sabzi mandi it takes place throughout the year. The work in the latter is also more arduous. A vegetable arhtia said, 'I wake up at 2.45am and I am in the mandi at 5am. The arhtias in the grain mandi must be waking up at 9am. What do they do? They are free.' Auctions take place in the sabzi mandi daily from 5am to 9am while, even in the peak of the procurement seasons, auctions and sales in the grain mandi never start before 9am. Fruit and vegetables are also more vulnerable to deterioration and rotting than grains, and they require more attention in terms of handling. As a Market Committee official said, '*Zameen aasmaan ka farq hai. Yeh daily ka kaam hai; yeh gande kapde waala kaam hai; woh chitte kapde*

waale kaam hai' (They are worlds apart. This work happens daily; this work dirties your clothes; that work can be done with clean clothes). Another important difference is that the arhtias in the sabzi mandi rarely, if ever, give credit to farmers. This is linked to the nature of trade in these vegetables, discussed in later chapters.

6.3.2 *The Villages*

In my fieldwork I found that while some villages (*'pind'*) were very old, with all the Jats belonging to the same *gotra* (clan), others had been re-organized or established in the wake of Partition. I have not followed these histories, but some general observations about villages can be made. In the pre-Green Revolution era, there was a clear distinction between villages in terms of residential (*abadi*) and non-residential areas, with all the houses being concentrated in the former even though Dalit houses were at the margins (Wyon and Gordon 1971; Jodhka 2002). However, over the years this distinction has become less clear. Many Jat farmers have built houses in the middle of their farms, while other castes are interspersed throughout the core residential area. All villages have a Panchayat Office, dairies, small convenience shops, schools (sometimes including private schools) and many also have a credit cooperative society. Given that the rural population of Punjab is predominantly Sikh, all villages have a gurdwara. In some villages (including a couple of the survey villages), Dalits have built their own gurdwara as a symbol of caste assertion.⁷⁴

All the houses in the village are *pucca* (solid and substantial) and furnished with modern amenities including refrigerators and TVs. This is true of both Jat households and those of other castes, although Jats can afford more and qualitatively better ones. Villages are well connected by roads and many by local, private buses and *tempos* or three-wheelers. It is common across castes to have a motorbike, although more so among Jats who also often own car(s). Most villagers go to Khanna or other similar small towns to make significant household purchases.

As mentioned in Chapter 5, the household survey villages were selected such that they represented some of the major crops and cropping patterns in the area. Table 6.2 lists these cropping cycles. The four survey villages are described below (see Figure 5.3):

⁷⁴ See Jodhka (2002) and Ram (2004).

1. Ladmajri: 20-25km from Khanna, which is the nodal mandi for the farmers even though the village is in a different block. Paddy and wheat are the main crops in the village; only a few farmers cultivate any other crop.
2. Rattankalan: 15km from Khanna, administratively within Khanna block. No one kind of cropping pattern is dominant in this village, although certain types of marketing for some crops take precedence.
3. Uchakhurd: 6km from the centre of Khanna town and adjoining the Khanna-Malerkotla road. Cauliflower dominates the agriculture of this village.
4. Paunpura: 8km from the centre of Khanna town and adjoining the Khanna-Samrala road. Like Ladmajri, although administratively in a different block, Khanna is the main mandi for the farmers. It is among the many villages that constitute the potato belt in the area.

Table 6.2: Major cropping cycles in the survey villages

Crop Cycle	June Year 1 <-----> May Year 2		
1	Paddy		Wheat
2	Paddy	Potato	Wheat
3	Paddy	Potato	Maize
4	Paddy	Potato	Sunflower
5	Paddy	Potato	Okra
6	Paddy	Wheat	Okra
7	Paddy	Cauliflower	Cauliflower
8	Cauliflower	Cauliflower	Wheat
9	Cauliflower	Cauliflower	Cauliflower
10	Cauliflower		Wheat

Source: Own fieldwork 2014-15

It is difficult to determine why different villages have different cropping patterns even though they are only a few kilometres apart. Respondents insist that villages develop their own '*rivaaz*' or accepted practices over time. This begs the question of why these practices develop. Some possible factors shaping particular patterns of cultivation could be distance from the mandi, distance from major cities like Ludhiana, and enterprise of individual farmers in villages, all of which will appear in discussion at various points in the subsequent chapters.

This chapter has set the empirical context for the findings of this study. The following chapters explore the key dimensions of agrarian accumulation as I defined it in this research.

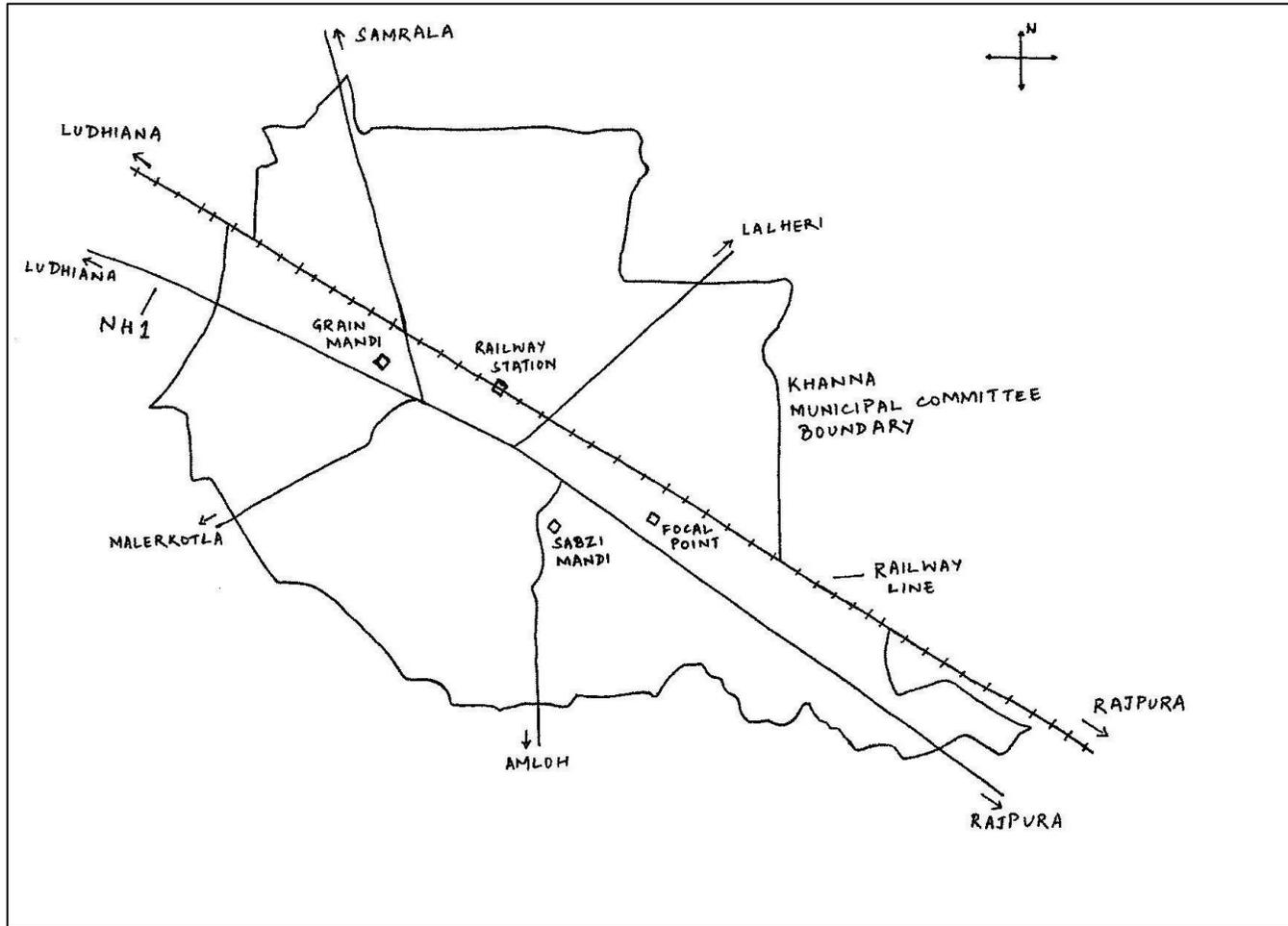


Figure 6.1: Map of Khanna town (not to scale)

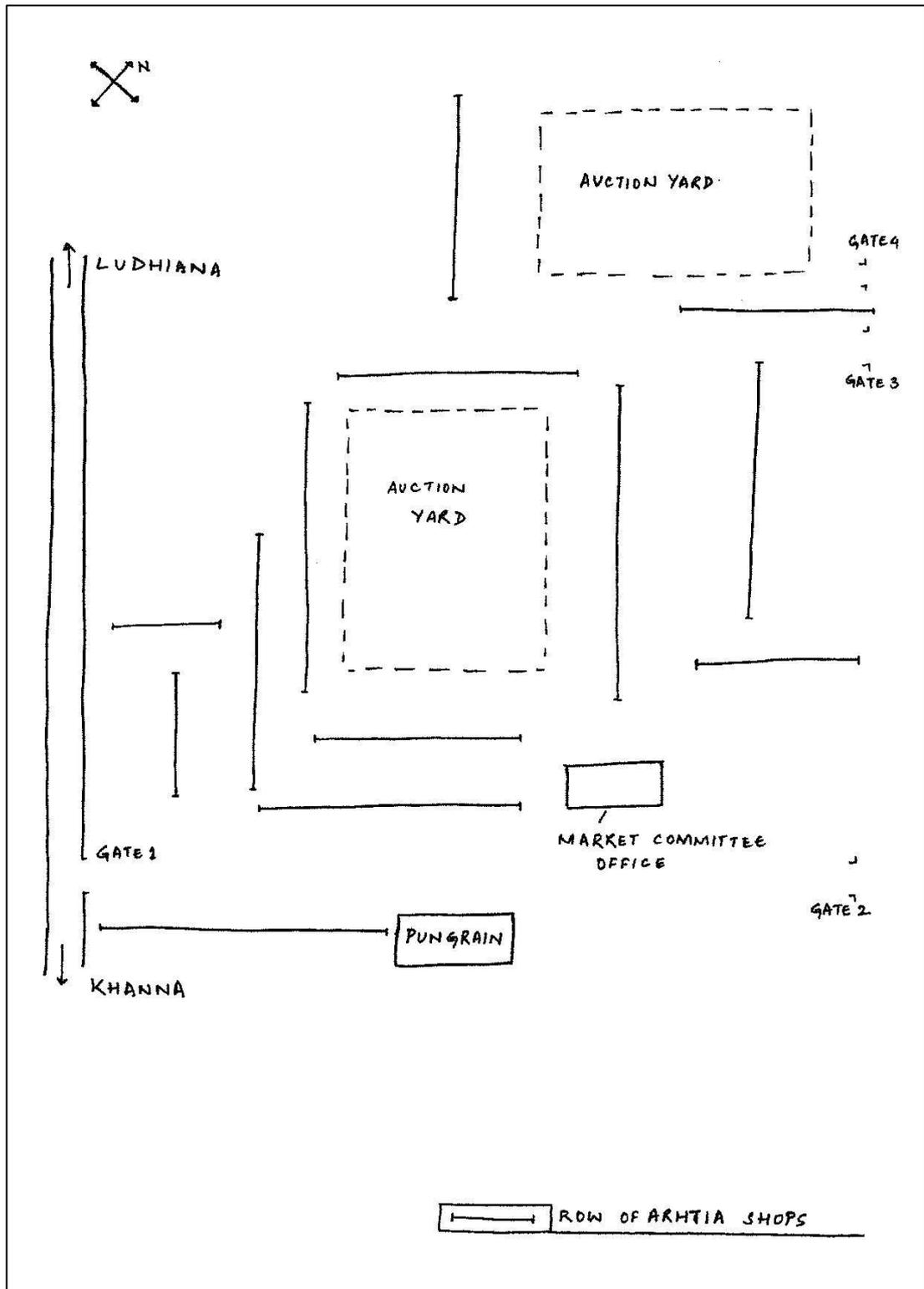


Figure 6.2: Grain Mandi, Khanna (not to scale)

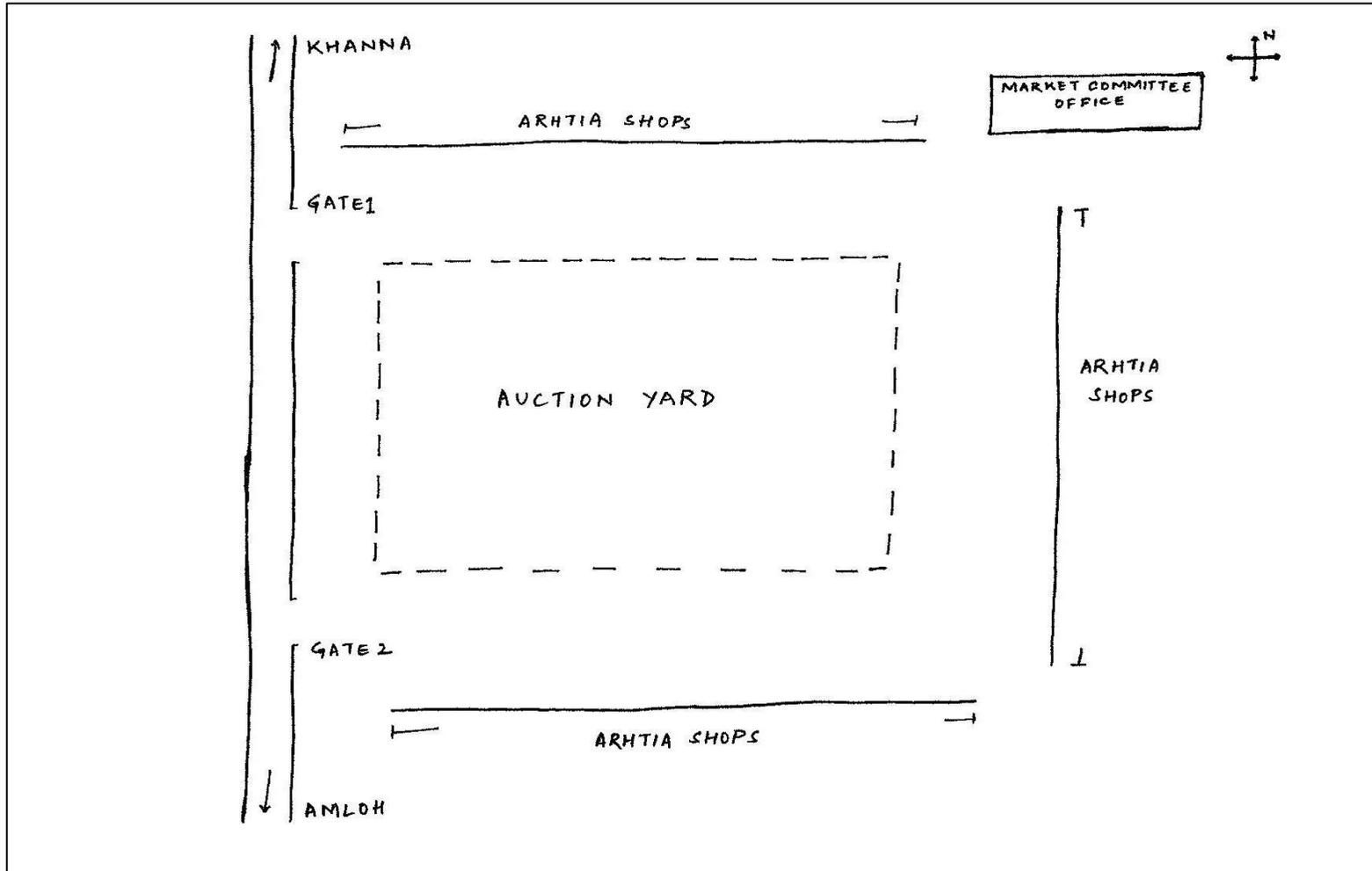


Figure 6.3: Sabzi Mandi, Khanna (not to scale)

Chapter 7. Farms and Markets

Through the foregoing discussion we have established that production and marketing are the main sites where accumulation through agriculture takes place. For the individual farmer, his landholding and the multiple markets he sells the commodities in constitute these sites. At the same time, each commodity requires certain types of investment owing to its physicality. Each commodity also has a market with its own internal dynamic. Accumulation can, therefore, take place when farmers can effectively negotiate their own resource constraints within wider structures of commodity production and trade.

Towards explaining this, this chapter is divided into four sections, one each on paddy, wheat, potato and cauliflower, the main crops cultivated in the field area. Each section discusses the production process, costs and profits for the crop, as well as the structure of its markets and associated farmer-trader relations. The chapter ends by reflecting on cross-cutting themes relevant for understanding agrarian accumulation that emerge through the discussion of different crop dynamics.

7.1 Paddy

As discussed in Chapter 4, paddy cultivation was initiated in Punjab in the early 1970s as a part of the Green Revolution. Paddy is said to have arrived in Khanna mandi for the first time in 1974 and government procurement of paddy is said to have started in 1976. From then on, the volume has increased continuously. As in the rest of the state, paddy emerged as a main cash crop for farmers in the villages around Khanna. Paddy was widely grown in almost every village that I visited and its life cycle in terms of production and sale constitutes an important part of the year for the state, agriculturally and in terms of its wider economy. Yet, the literature review showed that the continuous and widespread cultivation of paddy over the past few decades has led to declining yields and environmental problems. This section sets out the various aspects of production and marketing of the paddy crop in Khanna, with a view to bringing to light the ways in which paddy as a commodity facilitates accumulation in agriculture.

7.1.1 Paddy Production

There are broadly two types of paddy grown in Punjab – *parmal* and basmati. Parmal are non-aromatic paddy varieties and are purchased by the government. The most popular varieties with farmers are Pusa 44, PR 121 and PR 122 as they give the highest yields of approximately 30-35 quintals per acre. Over the past several decades, the seed varieties for this type of paddy have been primarily developed and promoted by the Punjab Agricultural University (PAU).

Basmati is the aromatic variety sold in the domestic premium and export markets. It has only been grown in Khanna in the last decade, i.e. in the period of liberalisation. This was made possible by the development of the seed Pusa 1121 by the Indian Agricultural Research Institute in 2005, and the fact that exporters found a market for the same in the Middle East. More recently, in 2014, Pusa 1509, a higher-yielding and longer-grained variety was created. Most paddy varieties, including Pusa 1121, take around 140 days to mature from nursery-sowing to harvest. The maturation period of 1509 is much shorter at 115-120 days. This was considered beneficial for farmers as it would allow them to save on irrigation and chemicals costs, and especially suited those who cultivate potato (see Section 7.3); however, as we will see below, this is only partly true. In the 2014 kharif season basmati was grown more widely in the Khanna area than ever before, although still in quantities far smaller than parmal. Table 7.1 gives the figures for parmal and basmati crop arrival in Khanna mandi in recent years.

Table 7.1: Percentage of parmal and basmati paddy arrival in the Khanna Market Committee (figures in quintals in brackets)

Type of paddy	2012-13	2013-14	2014-15
Parmal	93.6 (2,350,580)	90.4 (2,170,006)	82.7 (2,396,950)
Basmati	6.4 (160,973)	9.6 (229,373)	17.3 (503,119)

Source: Market Committee Office, Khanna 2014-15

The traditional basmati varieties were originally cultivated in the north-western parts of the state in Amritsar and Tarn Taran, Karnal in Haryana, Dehradun in Uttarakhand, the Tarai regions of UP and parts of Pakistan. These varieties are extremely fragrant but low-yielding. The technological innovations in seeds allowed the evolved varieties to retain the prized characteristics of basmati – elongation,

aroma and ease of cooking – with attributes such as higher yields and reduced discolouration.

Production Process

Until recently, farmers in the state used to start transplanting paddy in late May and sowed basmati varieties in late June to mid-July. However, in 2009 the state government banned transplanting paddy before 10th June in an effort to more closely synchronize the transplantation with the monsoon season – thus reducing pressure on groundwater resources. The power supply is switched on by the state government on this date, although occasionally the date is not strictly adhered to.

Both kinds of paddy seeds are obtained by the farmers either directly from PAU or from government-licensed seed farms and retailers; the paddy seed market has no major corporate seed player. Seed retailers usually sell the seeds produced by the seed farms for a commission. Sometimes farmers produce their own seeds but being hybrids, they lose their potency after one or two seasons. As a result, farmers are compelled to purchase new seeds every other year. In fact, agro-input dealers said that the big farmers, the more ‘business-minded’ ones, usually purchase fresh seed every year to get higher yields. These dealers, based in the villages and in Khanna town, are also the chief source of crop chemicals, i.e. fertilizers, pesticides and fungicides, for farmers.

A crucial element for paddy cultivation is irrigation. Once transplanted, paddy seedlings need to be in standing water almost consistently for proper growth. As discussed earlier, farmers are critically dependent on groundwater for irrigation of this crop and use submersible tube wells, colloquially referred to as ‘*motor*’, to extract the water. The Punjab government claims to provide free electricity for agricultural purposes for eight hours each day during the peak irrigation periods. But farmers unanimously claimed that this was not the case in practice and electricity was only available for three to four hours, even at times of peak requirement. Therefore, farmers are forced to invest in generators – and the diesel to run them – to operate their pumps. This increases their overall costs to such a degree that a few farmers even claimed that they would be better off paying for the electricity. It is not surprising, then, that the central government’s deregulation of diesel prices in 2014 which was accompanied by a slump in oil prices came as a huge relief to the farmers,

although if and when prices increase again, costs are likely to follow. Again, the larger farmers were the ones who had the wherewithal to invest in diesel generators, while the small/petty producers claimed the irregularity in electricity supply meant they often had to compromise on irrigation – leading to lower yields and less income.

Paddy transplantation is extremely labour-intensive and done almost entirely by male migrant labour from Bihar. Agricultural labour gangs, known locally as ‘labour parties’, of approximately six to ten men work on paddy fields at the rate of Rs 2,000 per acre. These gangs are led by a ‘*chaudhari*’ who is responsible for establishing deals with the farmers and bringing enough workers with him for the purpose. Usually, every village has around twenty such labour gangs, each working for several farmers. The sequence in which the fields are worked naturally depends on the sequence in which land is prepared and seedlings are ready. However, labour is far from abundant in Khanna and there are other ways in which farmers can assure timely transplantation. The labour gangs need immediate cash for their daily expenses and farmers who are able to give such advances can get their work prioritized. Similarly, the gangs need space to put up their tents and the farmers on whose fields they do so have more leverage to get work done by the workers. Again, it is the larger, wealthier farmers who are able to extend credit or offer space for the gangs to camp.

After transplantation, the crop has to be maintained through timely sprays of chemicals and flooding of the fields. In the case of large farmers, this is often done by *sanjhis* or *naukars* (attached farm labourers). They could be local Dalit men or male migrants from elsewhere. When they are migrants, they are provided with accommodation in the farmer’s fields, in the tube well room (‘*motor te*’). When they are local villagers, they could be living either on the farmers’ fields or in their own house. The survey found that large farmers primarily growing more than ten acres of paddy and wheat almost always employ one or two *naukars* (Table 7.5) who are paid between Rs 4,000 and Rs 9,000 per month on six or twelve month contracts. During their period of employment, they are at the beck and call of the farmer. The majority of large farmers do not do crop maintenance themselves, even when their holding is larger than can be managed by one or two *naukars*; they prefer to employ labourers

(mostly local Dalit men) on a daily basis when needed, In this sense, these capitalist farmers function like farm managers.⁷⁵

Parmal harvesting, which starts in late September, is done almost entirely by combine harvesters. Combines cost around Rs 1,500,000 and usually no more than four or five farmers in a village can afford one. All other farmers hire the combines to harvest their crop. Fewer farmers use combines for harvesting basmati since it causes more grain breakage which leads to a lower price in the market. Harvesting of basmati varieties is usually done manually, by labour gangs, a much more expensive process than mechanical harvesting. Thus, farmers contend that even though basmati is argued to be a more economical crop with its shorter growth cycle and associated lower chemicals and irrigation expenses, once labour costs are taken into account there is very little difference between the two. It should also be noted that the now almost ubiquitous use of combines to harvest parmal has had important consequences for market processes (see below).

After harvesting, farmers burn the *paraali* (crop stubble). The state government has banned the burning of the paraali because it causes a clear and severe deterioration of air quality across the state (and beyond) and adversely impacts soil quality. Farmers, however, said that any other alternative would delay the schedule for their next crop, which they simply could not afford. This is a clear instance of the compulsions of time for accumulation within agrarian capitalism creating its own ecological crisis.⁷⁶

Costs/Profits

As discussed in Chapter 5, the estimates for costs are approximate. Almost all my key farmer-respondents estimated the average cost of producing parmal as Rs 10,000-Rs 15,000 per acre. Table 7.2 gives a detailed estimate of the production and marketing costs for parmal paddy. A couple of farmers stated it can be as high as Rs 35,000 per acre if the electricity supply and the monsoon are both poor. A prominent BKU leader argued that the cost is Rs 70,000 per acre and shared a copy of a letter

⁷⁵ It could be asked whether naukars are better off than daily labourers, or how much individual labourers make as part of labour gangs. However, answering these questions would require a systematic study of labour which is beyond the scope of this research.

⁷⁶ The situation resonates with Bhattacharya's observation that 'When the logic of capital gets naturalized, seasonalities in general appear intolerable, discontinuities cause worry' (Bhattacharya 2012, 7).

he had written to the central government to this effect. However, upon cross-checking the costs listed in the document with other farmers, this figure was found to be grossly exaggerated. Therefore, I assume that the average costs are Rs 12,000 per acre.⁷⁷ The yield of government quality paddy is about 30 quintals per acre. The MSP for 2014-15, when this fieldwork was conducted, was Rs 1,400 per quintal.⁷⁸ Using these figures, the profit on one acre of paddy comes to Rs 30,000. This would typically account for half or one-third the year's income from that acre, depending on the cropping cycle followed.

Table 7.2: Costs of production and marketing of paddy per acre

Item	Cost (Rs)
Cost of diesel for preparation of land (<i>bahai</i>) (done using tractor)	1,000
Labour: transplanting paddy	2,000
Fertilizers	1,000
Crop chemicals* applied before the seeds sprout	500
Crop chemicals applied after seeds sprout	700
Pesticide spray	700
Labour: spraying chemicals	2,000
Diesel for irrigation in case of low rainfall or less electricity	2,000
Harvesting (rent of combine harvester)	2,000
Total production cost	11,900
Costs to farmer in the mandi (cleaning and drying of paddy) at Rs 5.38 per 37.5kg bag	430
Total costs for paddy	12,330

Source: Own fieldwork 2014-15

*Includes pesticides and weedicides

Several farmers insisted that growing only wheat and paddy is not remunerative – or at least not as remunerative as it used to be, a reflection of increasing costs under liberalisation (income figures in conjunction with other factors are discussed in Chapter 8). However, given the effective administration of the MSP in the state, there continues to be a reasonable profit per acre in growing paddy. Nevertheless, most farmer leaders argue that the government must increase the MSP substantially.

⁷⁷ This is higher than CACP A1 costs of paddy for 2011-12 (Rs 9,038 per acre) (CACP 2014). Thus my findings corroborate other studies (Ramachandran et al. 2010; National Commission on Farmers 2006) and claims of farmers' unions that the CACP underestimates costs incurred by farmers.

⁷⁸ I found that paddy is sometimes bought by private buyers for Rs 20-50 below MSP, but officially recorded as having been bought at the MSP.

This was a major election promise of the Bharatiya Janta Party (BJP) in the national elections of 2014: however, after coming to power, the party has fallen shy of implementing the promise and increased the MSP by a mere Rs 50, i.e. from Rs 1,350 per quintal in 2013-14 to Rs 1,400 in 2014-15. The returns from basmati are more volatile, as will be seen below.

7.1.2 Paddy Markets

Paddy: Government Procurement

a. In the Mandi:

Parmal is also referred to as ‘government quality’ paddy because the government purchases all the parmali arriving in Punjab’s mandis. All farmers who grow wheat and paddy have fixed commission agents or arhtias in the grain market. These arhtias are fixed because usually they are the source of credit for these farmers; repayment is through the sale of the crop at the arhtia’s shop. The arhtia gets a commission of 2.5% from the buyer, in this case the State, on all food grains sold from his shop. Credit relations are discussed further in Chapter 9.

Paddy is procured by five state agencies: Pungrain (part of the Department of Food and Civil Supplies, Punjab); Punjab Agro Industries Corporation Limited (locally called Agro); Punjab State Warehousing Corporation (Warehouse); Markfed; and, Punjab State Civil Supplies Corporation Limited (Punsup). Of these, Pungrain is the nodal state level agency and, among other things, it is responsible for deciding the quantity of food grain to be procured by each agency. The FCI also procures paddy directly, but in much smaller quantities than the state agencies. Significantly, the state agencies make all procurement *on behalf of* the FCI. This has implications for the manner in which procurement is carried out at the field level (see below). Paddy needs to be processed – shelled and cleaned – to be converted into rice. Ultimately, the FCI stores the rice which it then re-distributes nationally through the PDS. This need for processing brings rice mills or ‘shellers’, as they are also known, into the picture. The individual milling capacity of the 55 rice mills in Khanna ranges from one to five tonnes per hour. Figure 7.1 shows the key agents of the parmali market.

Farmers → Arhtias → State Level Agency → Rice Mill → FCI

Figure 7.1: Key agents in parmal market

While the FCI procures the paddy from the mandi and stores it in its own facilities, the state agencies have no storage capacity of their own. This, I argue, explains to a great extent the way in which the actual paddy procurement process differs from that stated in the rules. The process through which the rice mills process paddy and deliver rice to the FCI is called ‘custom milling’ and the central government publishes updated schedules and rules each year. Since the state agencies have no storage capacity of their own, they store the paddy they purchase with the rice mills. Once the rice mills have the paddy at their mill, they are legally bound to deliver 67% rice from the paddy to the FCI. Moreover, the delivered rice needs to meet certain quality specifications, otherwise it is rejected. These specifications include a maximum of 14% moisture, 3% broken grain, 3% damaged grain and 3% discoloured grain.

The rice has to be delivered to the FCI by a set deadline, either in March or June. Several arhtias and mill owners argued that the FCI has become much more stringent over the years about the rice meeting the quality standards. On the other hand, the state agencies are under political pressure to buy every grain of parmal produced by the farmers. The combination of these issues forms the basis of the power of the rice mills in the procurement process. The main issue is that they are indispensable in terms of their processing function and work between the state and the central government, *using* the constraints of the former and *being* constrained by the latter.

The actual rule is that when a mound (*dheri*) of parmal is to be sold, a quality inspector from the state agency has to inspect it and ascertain if it can be sold on the same day or needs to be dried further. What really happens is that the inspector merely records the sale in the Auction Register without actually doing an inspection. The decision on purchases is actually taken by representatives of the shellers, their foremen. Officials from state agencies visit the mandi at designated auction hours but only to record purchases; the foremen are the ones examining the quality of the paddy, speaking to the arhtia and deciding whether or not to buy. As one agency inspector said, ‘The foremen of shellers come and inspect the paddy. They are experts. They can tell just by feeling and weighing the paddy by hand what the

moisture of the paddy is, the weight of the rice, and so on'. If, for example, the paddy moisture content is too high (the permitted percentage at the time of procurement is 17% although mills will sometimes accept up to 20%), then the mills can refuse to purchase the paddy that day and ask the arhtias to dry it further. They can also flatly refuse to buy it.

Further, some arhtias and government staff claim that Pungrain's allotment of which agency buys from which arhtia shop is done row-wise, according to the amount of crop arrival at any shop and each rice mill's capacity. However, the allocation can also be done on different grounds, i.e. based on existing business or informal relations between the arhtia and mill owners. As one arhtia said, 'if we have an established relationship with a rice mill owner or we have invested in it (*'humnein usmein hissa daal diya'*) or they have become an honoured relation (*'lihaazi'*), then the sheller can be changed. An application has to be made to the Market Committee for that'. Mill owners who also have arhtia shops lift the crop from their own shop, irrespective of the row their shop falls in. Similarly, arhtia shops can be allocated to mills if the arhtias and mill owners have 'good relations', as everyone likes to say. At least in one case I know of, the daughter of the arhtia and the son of the rice mill owner are married.

When this is the case, mills are more likely to accept below par paddy from the arhtia's shop more easily. Varun Seth, a key Mahajan arhtia-respondent said:

The last shop [in this row] is Punsup's; the next shop is closed – they have a branch elsewhere. Ours is Markfed, the next shop does not work from here, the next is something else... Actually, this system works without any government interference. We have an agreement with the rice sheller; whether it is a moist mound [of paddy] or a dry mound, I can get any kind of crop lifted by the sheller. After all, the government does not have to lift the crop; the sheller has to do that.

The quality of the paddy is a problem especially in relation to its moisture levels, which in turn is linked to the shift from manual harvesting to mechanical. The former took a few days to be completed so the crop was adequately dried by the time it reached the mandi. However, since combines complete harvesting more quickly, often within a day, the moisture in the paddy when it reaches the mandi is almost never below 19% and this often becomes a point of contention between the farmer,

arhtia and mill owner. The following incident narrated by Jaspal Singh, another key arhtia-respondent (Jat), is telling:

In the next shop, one of his farmers, a small farmer, he got very moist paddy. In the village, the combine-owners just say that we will cut this one's paddy, then that one's, then come to your fields. It was late by the time they cut it. The small farmers get scared and give in but the big farmers can refuse and say 'No, we won't get it cut from you today'. But one has to pay the price of mistakes. The crop was cut wrongly, when it was too wet. When the labourers wanted to open the bags so that it could get some ventilation, the farmer refused...The sheller refused to pick it up because the moisture content was 22-23%. If the sheller or the arhtia says to keep this paddy for two days, then it is best to do so. Nirap Singh cut paddy in his field and got two trolleys to our shop yesterday. The paddy was perfectly ripe and the sheller saw it and said to bag it straightaway. The formal auction for it will happen today.

This reveals the kind of everyday issues that emerge in the mandi due to moisture levels at the time of procurement. Moreover, Nirap Singh, the farmer mentioned by this arhtia who brought in the perfect crop, is a wealthy and powerful farmer in his village. This quote then also brings into sharp relief the subtle, 'everyday' aspects of production that disadvantage small farmers vis-à-vis larger, richer ones.

There is further evidence of the informal arrangements that exist between arhtias and rice mills. During fieldwork, paddy procurement by state agencies was to start on 1st October but the arhtias went on strike. The central government had suddenly declared that every jute bag (*bardana*) had to be filled with 40kg of paddy instead of 35kg but the arhtias claimed that the bags were not big enough and the order made no sense. The matter was resolved after ten days and the amount of paddy per bag reduced to 37.5kg. However, during the strike, three or four arhtias told me that they were already sending the paddy that was coming in to the mills on *kachi* (informal) receipts, the mills were accepting it and that once the government started its procurement, they would write appropriately dated formal receipts. The arhtias claim they had no choice because otherwise, with the amount of paddy coming in every day, there would be no space in the mandi to store it. Indeed, between the beginning of October and end of November, the arrivals at Khanna mandi are in such large quantities that the arhtias struggle to manage it within their *phads* (allocated spaces). During the peak procurement season, I occasionally witnessed arhtias argue with each other over this space.

Once the crop is approved for purchase, it is cleaned, packed in jute bags and transported to the mills. In further evidence of the limited formal role of the state agencies in this, an inspector stated:

Previously, when the filling was done, an agency person would be sitting there to write the gate pass and then a Market Committee person would be at the gate to check. But they don't check anymore; everyone knows that the bags will be correct. This is because the arhtia will not send more bags than he has to and the sheller will not take less than he is supposed to get. If more bags were loaded at the mandi than are unloaded at the mill, it is the responsibility of the transporter.

In terms of the procurement process, an important distinction emerged between arhtias and an arhtia-cum-rice mill owners. While the former are dependent on the agencies and the rice mills they are linked to for the procurement of paddy from their shops, the arhtia-cum-rice mill owners are able to conduct the procurement swiftly even when the paddy does not meet the moisture specifications because they have storage space for drying in the mill. The arhtia-cum-mill owners, therefore, are better placed to capture more business in the mandi. However, the expansion of business in the mandi is not that straightforward and in any case, no more than 15-20% of arhtias are arhtia-cum-mill owners. Arhtias confessed that sometimes farmers complained when the paddy at other shops was lifted first but they were helpless in this regard. An arhtia-cum-mill owner, on the other hand, admitted:

It is beneficial for the farmers to be attached to us because whatever crop they bring to us, the agency need not be involved – in the sense of when it will come for auction, etc. Whether they bring the paddy at night or during the day, we get it lifted. We also get it dried since we have space. It is not according to the rules, but this is what happens.

In this context, maintaining good relations with rice mills is a necessary trick of the trade for those who are only arhtias. In the words of one of my key respondents:

On the record, arhtias and shellers have no relations. The arhtia has a relation with the inspector. He tells the arhtia which sheller to send the stock to. But off the record, there is a direct relationship between arhtia and sheller. The government only writes the information about who and how much.

The above discussion indicates the fact that social networks are crucial for procurement operations to run smoothly.

b. The Business of Milling:

As mentioned above, mills have to produce and submit 67% rice, to quality specifications, from the paddy that they receive through the procurement process. If the paddy does not yield 67% rice, they have to buy in rice privately from elsewhere to make up the specified amount. The mills also have to make private purchases to meet the allowances for imperfect grain mentioned earlier because the relatively poor quality of paddy received from the mandis results in higher proportion of imperfect grain than permissible. Mills are constrained by this but also benefit from the fact that they are allowed to keep and trade the 33% by-products from processing paddy.

Several respondents – arhtias, mill owners and state agency officials – argue that the rice yield from paddy has declined over the years from approximately 70% to 62-64%. Yet, the FCI makes no concession in this regard and follows what is considered to be an outdated system. Any deficit from the required 67% is made up by mill owners purchasing cheaper and somewhat poorer quality rice, usually from Bihar but also from UP, Madhya Pradesh and Chhattisgarh. This is done through traders and brokers. Not many like to talk about this rice as it is brought into the state illegally. Therefore, there is private trade in rice but not in parmal paddy that is sold by local farmers. Purchase of rice from other states adds to the mills' regular expenses on machinery and labour, as well as the large bribes they invariably have to pay to the FCI during the submission of the rice. This is one of the reasons why mill owners sometimes refuse or delay the procurement of *halki* (light), i.e. low-yield, rice.

Similarly, the problems with moisture levels stem from similar constraints. Higher moisture content implies that the mills have to incur higher labour expenses in drying out the paddy. While the maximum moisture level at the time of the procurement is 17%, it is 14% in the rice delivered by the mills to the FCI. Rice with a 15% moisture level may be accepted against a 'value cut', i.e. a cut in the milling charges paid to the shellers. Just before the procurement season started in October 2014, the central government suspended this provision. The mills went on strike and forced the government to reverse its order. So, even when farmers insist that their paddy is of good quality, mills may refuse or delay purchases from the mandi on these grounds, leading to harassment and occasionally prices lower than the MSP.

The large capitalist farmers get the best quality paddy to the mandi and their crop is lifted with the least amount of hassle.

In 2010, the rice mills also forced the government to withdraw the newly introduced paddy seed variety PAU-201 from the market, arguing that it had a higher percentage of discolouration and broken grains. This, they argued, added to their costs. Farmers, on the other hand, complained that this variety had higher yields and that the government had buckled under pressure from the rice mill owners. This variety was also argued to be shorter duration and less water-intensive (Seth 2010). This reveals the power of the rice mills but it also says something about the FCI and the central government. There is both evidence and consensus at the field level that amending specifications in the custom milling process would benefit both farmers and mills to adopt such varieties. However, there is no indication that this will happen. In fact, the government wants to withdraw the FCI from procurement in Punjab entirely according to the Shanta Kumar Committee Report 2015.

Until fairly recently (traders put this date variously between ten to almost twenty years ago), 'levy' was quite prevalent in Punjab. Levy was another route through which the FCI procured rice. As per the Punjab Rice Procurement (Levy) Order 1983, levy in licensed mills is the percentage of rice that the mill is legally obliged to sell to the government at a price determined by the government. Under this system, the rice mills would purchase paddy from the mandi with their own resources and sell 75% of the processed rice from this to the FCI; they were free to sell the remaining rice as they deemed fit. Sans the legal terminology, levy basically allowed for private trade in rice, which custom milling does not allow.

I was unable to find out the exact timeline of the changes vis-à-vis levy rice in Punjab or the ways in which the procurement process under levy at the field level was different. However, the custom milling policies from a few years ago reflect the reduced importance of levy rice, as they made the latter contingent on completing custom milling. In fact, Punjab (and Haryana) abolished levy rice in 2013, followed by the rest of the country in 2015 (Das 2015). It was argued that the removal of levy would compel states to strengthen their procurement systems and ensure that farmers are not exploited by rice mills. However, in Punjab, the MSP has always been effectively administered. What, then, can explain this shift away from levy rice?

Most of my respondents argued that it happened because profits in levy or private trade of rice began to decline, and the mills themselves were not keen on continuing. They argue that this decline coincided with the increase in paddy production in other states (such as West Bengal and Chhattisgarh) and decline in the demand for parmal paddy produced in Punjab.⁷⁹ It is even argued that without custom milling of the kind that exists today, paddy produced in Punjab would have no buyers, even within the state.

One mill owner argued that the disadvantage of custom milling is that the mill can only be run for some months, implying underutilised mill capacity and I witnessed mill owners asking Pungrain officials to allocate greater amounts of paddy to them at the beginning of the procurement season. However, most of the mill owners I met agreed that the system is quite beneficial to them because they do not have to pay for the paddy, and can make money on the by-products. In late October 2014, well after the start of the official paddy procurement season, and with very little discussion, the central government declared that the milling charges, which had been Rs 15 per quintal of rice for the previous 20-30 years, were reduced to Rs 10. However, there was no resistance from the mills. The reasoning behind this was that the sale of the 33% by-products was seemingly enough for mills to cover their costs as well as make a profit. In fact, if one considers that the mills do not pay for the raw material, i.e. paddy, under custom milling, their profit from the sale of by-products is effectively pure profit.⁸⁰

The by-products are the rice bran or polish, the broken rice or *nakku*, and husk. Bran is sold to solvent industries which extract oil from it and pay the mills according to its oil content. These industries also produce de-oiled cakes which are sold to different feed mills. The broken rice is sold to alcohol distilleries. Husk is sold to any industry that is willing to buy it to burn it as fuel, for example brick kilns, tyre factories, furnaces, etc.

⁷⁹ This corroborates the argument made by Chand (2008) that since the late 1980s/early 1990s Punjab has been producing rice (and wheat) in surplus much greater than the deficit at the national level.

⁸⁰ Mill owners argue that in addition to operational costs that are compensated by the FCI, they have to pay many bribes (documented by Kaur et al. (2007)). But at least in some cases, these bribes are for violating the rules so presumably it is more economical for them to pay bribes than follow the rule. Sometimes, the bribes are extracted by government officials in which case refusal to pay would impact the mill adversely.

One arhtia contemptuously and perhaps enviously exclaimed that running a rice mill for government milling requires no entrepreneurial skills whatsoever precisely because they do not have to invest their own money in the business. Obviously, this cannot be entirely true and some mills incur losses. One of my respondents, Ashok Bahl, explained how they incurred large losses in 2009-10 in the rice mill he co-owned and operated at the time due to excessive breakage in the paddy variety and some mismanagement on their part. The president of one of the rice millers associations of Punjab, based in Jalandhar district, argued that more mills incur losses than is evident. However, these losses were not studied systematically in this research. Kaur et al. (2007) have noted that while some mills have zero net earnings, most earn above a million annually. I contend that the fact that mill owners are exempt from investment in raw material is the reason the industry has continued to attract new entrants over the years. It is also one of the most sought after avenues for diversification among arhtias.

c. Delayed Payments:

On 18th October, 2014, three weeks into the official procurement season, came news that the FCI had stopped procurement payments to the state agencies. Under the existing arrangements, the state agencies receive handling charges from the FCI, which they then use to pay the arhtias. The state government was unable to ameliorate the situation, being in a financial crisis of its own. In this context, it is understandable why the stopping of payment became such a big issue in the mandi.

Arhtias pay their labourers and farmers only after they have been paid by the agencies. With no central funding, the state agencies could not pay the arhtias and so the farmers and labourers went unpaid, creating a crisis of payments in the mandi. One arhtia said that the children of two of his farmer-clients were getting married the next month and they needed the money from the crop. I witnessed farmers asking arhtias for money and being refused at multiple shops since the payments had not arrived. Some arhtias dipped into their own coffers to pay at least some of the farmers' expenses, but not everyone was as 'generous'.

The problem happened ostensibly because the centre claimed that it had already paid the necessary amount to Punjab over the previous years, and unless the state government produced papers showing otherwise, the centre would not release more

money. The state government, a BJP-SAD coalition, had the reputation of being extraordinarily corrupt, and it was suspected that the government had misused the money. A more plausible explanation seems to be that the real power tussle between BJP and SAD at the state level prompted the centre to hit the SAD where it would hurt them the most – the latter’s core support comes from Jat farmers. On 5th November, a large protest (*dharna*) was organised in the mandi outside the Pungrain office and the Sub-Divisional Magistrate of Khanna had to come to placate the protesting arhtias and farmers. The arhtias leading this protest were Congress-affiliated, and used this opportunity to mock the state government. A popular line of argument in the mandi, also oft-quoted in regular conversations, went along the lines of: ‘When the Congress was in power at the centre, the Badals [SAD leaders] said they meted out step-motherly [i.e. bad] treatment to Punjab. But now its mother and father are at the centre [i.e. BJP], so what is the problem?’ Jaspal Singh is a member of the SAD and I was in his shop when his pro-Congress neighbour came to call him to join the protest. He hesitated a lot before going because he saw it as a Congress protest.

This entire episode revealed the mandi to be an important site of political contestation, a theme revisited in Section 7.2. Leaving the protest aside, even day-to-day conversations about the state of affairs in the mandi would often become a discussion on the parties in power. Numerous arhtias and some farmers said that the Congress government, led by Captain Amarinder Singh, was the most beneficial for the mandi.⁸¹ This is not surprising since Khanna mandi was said to be dominated by Congress supporters. But what is relevant to this research is that this politicisation is only possible because paddy and wheat-growing farmers are critical of the economy and the politics of Punjab. In fact, the protests by arhtias in Khanna mandi and other places across the state were effective, and despite the complaints, most arhtias and their accountants seemed quite confident that sooner or later the payment would come; payments were eventually reinstated in instalments from 8th November onwards. This episode also reflected the increasingly constrained federalism that exists in India, a relatively greater problem in Punjab owing to its troubled political history. While agriculture is a state subject, the states in themselves are crucially dependent on the centre for facilitating its development. The destiny of the farmers

⁸¹ Captain Amarinder Singh was re-elected as the Chief Minister of Punjab in March 2017.

in Punjab, therefore, hangs on the balance of the centre-state relations. Additionally, this episode indicates how arhtias are able to leverage party politics for their own interests.

Basmati: Private Procurement

Since the effective disappearance of 'levy' from Khanna's grain markets, basmati returned private players into the paddy market significantly. As mentioned before, basmati is meant mainly for the export market; the arhtias unanimously state that its production in and around Khanna is linked directly to the opening up of basmati markets in the Middle East. Moreover, since export markets and private agribusinesses are central to development policy under liberalisation, basmati purchasers/mills/firms have also been exempted from paying market fees in the grain mandis of Khanna.

According to senior management of basmati companies, the industry started expanding in the late 1980s as many Hindu traders moved from Punjab to Delhi due to Sikh militancy. Many of the traders were from the traditional basmati-growing areas, which were also the core areas of militancy. Based in Delhi, these traders realized that good quality basmati were also grown in Haryana, and they started investing in small mills there. This is perhaps one of the reasons why Haryana continues to have a far greater number of, and larger, basmati mills than Punjab. Many traders and different kinds of mill owners I interviewed were also of the view that the Punjab government's policies are not conducive to industrial development. There are large and small basmati mills in Punjab as well, but most of them are in the traditional basmati belt of the state, Amritsar, Muktsar and Tarn Taran. The main issue is that these firms and their owners are not native to the field area being studied here, a point I return to below. In 1989, the firms engaged in rice exports, a big part of which was basmati, organised themselves into the All India Rice Exporters Association, which continues to be influential in shaping relevant policy for the industry. Mills that existed in Punjab and Haryana continued to be largely localized and small-scale until the early 1990s. Finances became available in the 1990s with changes in credit norms (Section 3.4.2), which allowed them to expand. Simultaneously, new varieties started being developed (discussed earlier).

Interviews with pucca arhtias and mill owners revealed that some of the biggest basmati mills in Punjab and Haryana have at some point done custom milling of parral for the government. Since custom milling was well-managed by the state and central governments, it allowed mills to create reserves of capital which were invested in the basmati trade and milling. While some mills gave up custom milling, others continue as it is an assured, low-risk business. A basmati mill I visited that had opened in 2014 in Nawanshahr, 60km north of Khanna, followed the same strategy of using custom milling as a buffer while finding its feet in the basmati market. Moreover, as indicated above, not all basmati mills are large-scale. Some smaller ones process paddy for some of the bigger mills. Some parral and basmati mills also engage in trading and packing of basmati rice. This is because entering the export market requires large-scale operations, investment in branding and establishing trading networks abroad, not available to everyone. The establishment of basmati mills also requires much more capital investment than that for a regular rice mill, especially for storage and grading of grains, in order to process the paddy into rice of sufficient quality to be competitive in export and high-end domestic markets. Only those with already existing rice mills or other kinds of industries are likely to venture into this.

a. Pucca Arhtias:

Despite the growth of basmati production in the Khanna area, there are no operational basmati mills. The only one that exists never became fully operational and at the time of fieldwork was closed due to legal problems. The basmati purchasers in Khanna mandi come from elsewhere in Punjab and Haryana. Basmati mills/firms appoint representatives (pucca arhtias) in different mandis, who make purchases on their behalf for a commission of 1%. Historically, pucca arhtias in the mandi have worked with other crops (e.g. sunflower and maize); now pucca arhtias in basmati have emerged as important actors owing to the sheer volume of basmati that has started arriving in mandis such as Khanna in recent years. Figure 7.2 shows the key agents in the basmati market.

Farmer → Arhtia → Pucca Arhtia → Basmati Mill/Company

Figure 7.2: Key agents in basmati market

Any arhtia or trader in the mandi can be appointed as a pucca arhtia by a firm. In Khanna mandi, the pucca arhtias for basmati firms include arhtias, arhtia-cum-mill owners and brokers. The way in which traders are appointed as pucca arhtias for a firm is not fixed and depends on the trading networks of each trader/firm and on whether they have the means to manage an operation of that scale. Some of the pucca arhtias for big basmati firms are the biggest arhtias in the mandi or are arhtias with other businesses such as rice mills or distilleries. Connections play a role here: one brokerage firm landed the assignment from one of the biggest basmati firms because in the past they had managed to broker a crucial deal for the firm which saved the firm from a big legal problem of its own making.

The pucca arhtia participates in the auction (*boli*) on behalf of the firm and makes the purchases. During the auctions, there are usually at least 6-7 pucca arhtias bidding. They can be seen on their phones, often discussing the going rates in the mandi with someone in the firm to confirm if it is acceptable. Once the purchase is made, the pucca arhtia arranges the transportation of the paddy from the mandi to the basmati mill at the firm's cost. The pucca arhtia also draws up the bill for the arhtia and the farmers for the payment to be made by the basmati firm. However, as the next section shows, there have been major problems with payments for the basmati crop.

b. Market Volatility and Purchasing Politics:

The rule in the mandi is that payment for the basmati crop has to be made by the tenth day from when the bill is made. Any delay after that requires the purchaser to pay the arhtia interest of 1.5% on the amount due. A few years ago, this erupted into a massive problem as some firms were flouting the rule. During one of my earliest visits to the mandi, when the paddy procurement season of 2014 was just around the corner, I happened to attend a meeting of the Khanna grain mandi's Arhtia Association where heated discussions were taking place about this. A prominent basmati firm in Punjab had made huge purchases from the mandi but, almost a year later, had still not paid the principal amount to most of the arhtias. The meeting was about boycotting that mill in the mandi in the 2014 purchase season starting in late

September/October. The pucca arhtia for the firm was trying to prevent the boycott since he had a vested interest in earning a commission from sales to this firm. Ultimately, the firm was boycotted in the mandi and by mid-2015, even though the principal amount had been paid, the interest was still owed. In such situations, pucca arhtias, in principle, stand as guarantor, but in reality there is no way a single pucca arhtia could pay tens of millions in compensation.

It is important to understand why such delays in payment pose a problem for both arhtias and farmers. Arhtias usually recover their advance from the sale of the crop and give the balance to the farmer. At the end of a crop cycle, farmers often need more money than they earn from the sale of the crop. When there is a delay in payments by the purchaser, the arhtias nevertheless, sooner or later, have to give the money due to the farmer from their own coffers: this was corroborated in conversation with some farmers who confirmed that they had been paid for their basmati crop while their arhtias were yet to receive the full payment from the firm. Arhtias are, therefore, somewhat wary of the growth in basmati. It is a business where the power rests with the basmati firms, many of whom they do not know personally: unlike custom milling where they can manage many things based on their 'relations' with the mills, here they face the full brunt of the risk. It is in this context that one arhtia told me that basmati is a '*khatre ki ghanti*' (alarm bell) for their business. Alluding to the declining importance of personal links and word of honour in trade, another commented that '*vapaar mein vapaar wali baat nahin rahi*' (trade is not what it used to be). This shows both the significance of social networks for local market operations and the way in which non-local corporate capital is challenging this mode of business.

In the 2014 purchase season, basmati paddy prices were significantly lower than the previous year. From a high of Rs 4,500 per quintal in 2013, in 2014 even the best basmati failed to achieve more than Rs 3,000 per quintal. Most farmers with whom I spoke about costs said rates averaged out at Rs 2,500 per quintal. The implications for the income of farmers are discussed later. Here it is important to note that the fall in prices led to reduced commission for the arhtias, as well as lower recovery of advances.

Prices were expected to recover towards the end of season; instead, they continued to fall. There were several reasons for this. The high prices in 2013 had led to a large increase in the acreage of basmati paddy cultivated by farmers across the state so while the supply of basmati increased, demand crashed. The major increase in basmati exports since 2011-12 was due to demand from Iran; it accounted for over one-third of India's total basmati rice exports in 2013-14 (see Das 2014). However, this led to a glut and Iran stopped issuing new contracts in late 2013. Basmati mills, therefore, had large unsold stocks of rice and struggled to recover their costs. This led to a delay in payment to the arhtias, brokers and mills who worked with the paddy by-products creating a tense financial situation in the rice industry and, reportedly, many small mills closing.

In addition, in May 2015, news came that the basmati mills would not purchase any basmati of the 1509 variety in the 2015 purchase season. The basmati firms stated this was because the high broken grain percentage after processing of 1509 made it an unviable investment, although this could not be verified. This is an interesting case where the scientific community hailed a seed variety as being economical for farmers but it failed the test of the market. It is possible the firms could have used it by mixing it with other basmati when demand was high – but since demand had slumped in general, they withdrew completely from purchase of this variety.

The situation was so grim that the Arhtia Association of Punjab declared that no arhtia would lend money to farmers against basmati and that farmers would receive payment for their crop only after the arhtias had been paid by the buyers. Some of my key arhtia-respondents said that they were lending less or not at all against basmati for the next crop cycle. However, there were others who decided to lend nevertheless since they believed that business is about taking risk. Moreover, since their business depends on their credit relations with farmers, it was not always possible to turn away farmers who asked for loans.

The basmati payment deadlock was ultimately broken by the state government. Keeping its vote bank in mind, the Punjab government ordered its state agencies to purchase the crop at the parmlal MSP. However, the FCI, which is a central agency, refused. Two private agri-logistics firms were employed to store the grains on behalf of Pungrain. It decided to release the paddy to the rice mills for shelling before

delivering it to the FCI against cash security, another FCI procurement scheme.⁸² This episode shows the political weight of the arhtias and farmers engaged in paddy in the state. For farmers, it shows their collective political weight in state level politics, also discussed in Chapter 4. For arhtias, it shows how the State can intervene to protect arhtias from the full impact of liberalisation.

What does this volatile market mean for farmers? Firstly, there was a clear drop in income from basmati in 2014 due to the fall in prices. As mentioned earlier, most farmers agree that the cost of cultivating basmati is the same as for parmal.⁸³ Assume that the cost of one acre of basmati is Rs 12,000. In the fieldwork area, the basmati paddy yield averages 17 quintals per acre (despite the claims of government, scientists and journalists that the yield can be as high as 25). At 2013 prices, averaging at around Rs 3500, the average profit on an acre of basmati would have been Rs 47,500. In 2014, at the average price of Rs 2500, it would have been Rs 30,500, roughly the same as for parmal. At these lower rates, therefore, there is no advantage to growing basmati.

Interestingly, the rates were slightly higher in Haryana than in Punjab, and I heard from arhtias and farmers in the mandi that some farmers were taking their crop to Cheeka mandi in Haryana, just across the state border and about 100km from Khanna. One arhtia said, ‘The rates of basmati are set from Haryana because most of the mills are there. The rates are Rs 100-150 less here because of the cost of transportation’. Another said, ‘They [the traders and mills in Cheeka] accept paddy with a moisture content of 30% as well. This is because they have plants over there for parboiled rice.’⁸⁴ In Khanna, there is no such plant’. If farmers sell their crops in another mandi, the local arhtias lose business, especially commission. The underlying tension this creates is captured in this exchange between an arhtia and a farmer sitting in his shop while in conversation with me:

⁸² Cash security refers to procurement whereby ‘the paddy [is] lifted [i.e. procured] by a rice miller after making payment to Pungrain at the rates and norms as prescribed from time to time by the Government’ (Government of Punjab 2011). This is different from the procurement of parmal described above where the state agencies are the actual buyers of the paddy.

⁸³ Chaba (2015b) reports much higher production costs for basmati at Rs 1,800-2,000 per quintal for 2014-15. At 17 quintals per acre, the cost would be Rs 30,000 per acre. However, it is unclear if this data was collected systematically. The discrepancy could also stem from the fact that Chaba’s report is based on a different region (Doaba).

⁸⁴ Parboiled rice has greater demand in international markets than raw rice (Kaur et al. 2007) and is one of the products produced by basmati mills.

Farmer: When a farmer takes his crop to Cheeka, then the arhtia also says to him that you might as well take the advances for your expenses also from the arhtia in Cheeka. We have ‘*nau maas ka rishta*’ [relation of nine months]⁸⁵ with the arhtia.

Arhtia (annoyed): Everything would have got sold here; what is the need to go to Cheeka?

The 2014 price slump and the reluctance of arhtias to lend against basmati prompted many farmers to abandon it for the 2015 kharif season. However, there were some large farmers who still grew it as they believed that good quality basmati would fetch high prices. This is a risk only large capitalists can take. However, even in good years, these farmers hold some of their paddy back in small stores in their homes waiting for better rates. This is not an option they exercise with parmal as they would not get more than to the MSP in any case. This is also precisely why a well-administered MSP in parmal is so beneficial for small farmers; they can get the MSP despite bringing inferior quality paddy to the mandi. Unsurprisingly, BKU leaders are demanding an MSP for basmati, and some farmers and millers are asking for a minimum export price to be established. On the other hand, some basmati millers are opposed to an MSP as it would impact their claims to a premium price in the world market. By purchasing the 1509 crop at the MSP in 2015, however, the government has in some ways given in to the farmers’ demands, and an MSP is always beneficial for the arhtias as well.

7.1.3 Conclusion

Paddy, whether parmal or basmati, is a kharif crop that is labour- and water-intensive. The market structure and dynamics for the two different kinds of paddy are, however, entirely different – one is dominated by the State and the other by private firms. The common element is that processing is essential. Since paddy needs to be processed to be useful as rice, rice mills are important actors in the field, although they function on different terms in each market.

In the parmal paddy market, the central government holds more power than the state government since the procurement is carried out on its orders and behalf. But the state government carries greater pressure of the political exigencies. Partly due to the tension between the centre and the state, rice mills engaged in custom milling have

⁸⁵ Here, ‘nine months’ is a reference to giving birth and the phrase as a whole means that farmers have a relation with arhtia ‘from birth onwards’.

more power in the procurement process than is apparent. In the everyday politics of procurement, the rice mills have the most power. Moreover, the system is geared to allow mills to reap virtually pure profits from trading in the processing by-products. The arhtias benefit from state-led procurement since they receive a fixed commission on the fixed price crops they handle.

Basmati, on the other hand, marks a resurgence of private trade in paddy in Khanna. Given that it only grows well in Haryana, Punjab and a few other neighbouring areas, it represents a kind of accumulation process specific to this region. Its export-orientation embodies the dynamics of liberalisation. Like other export-oriented crops, basmati is subject to the volatility of external markets. It also threatens the existing exchange and credit relations in Punjab's mandis, since arhtias have to bear the burden of delayed payments from basmati mills. Since the basmati mills are not local, the arhtias have no informal leverage with them for payment unlike the custom milling rice mills for parmal.

The farmers, large and small, depend on parmal for an assured income. Wealthier capitalist farmers are more able to invest in production requirements in a timely manner than others; consequently, smaller farmers may very occasionally get rates below the MSP in addition to incurring further costs in the mandi. Nevertheless, all farmers receive a roughly similar guaranteed amount. Basmati prices, on the other hand, have proven to be extremely volatile and its production, therefore, involves greater risk. This is disadvantageous for farmers who are unable or unwilling to take the risk. Both for farmers and traders, basmati is in some ways an indicator of things to come were the FCI to withdraw from paddy procurement in Punjab in future. So far at least, the political clout of the state's large farmers and arhtias has weighed heavily against this tide.

7.2 Wheat

Unlike paddy, wheat has been grown in Punjab and sold in its grain markets since colonial times. Wheat is the staple cereal consumed by people in north-western India, and the climatic conditions are well-suited to its cultivation. However, like paddy, its production and marketing were transformed by the Green Revolution. This section discusses how this food-cum-cash crop fits into the accumulation trajectory of farmers in contemporary Punjab.

7.2.1 *Wheat Production*

Wheat is sown by the first half of November and harvesting starts in early April. Around 80-90% of wheat grown in Khanna area is PBW 343, the most popular variety since the Green Revolution. One large farmer in Khanna said he prefers to cultivate this variety since it is the most disease resistant and has high demand as it makes good bread. However, news reports in recent years have reported that this variety has increasingly been affected by a disease called yellow rust and it is slowly being replaced by a new variety, HD 2967, which was introduced by PAU in 2011.⁸⁶ As with paddy, no major transnational or domestic corporations are involved in the production of wheat seeds. The seeds are bought either from the university or licensed seed farms. Farmers also occasionally use their own seeds.

Grown by most farmers after the paddy crop, the sowing of wheat requires six to eight rounds of tillage. The sowing is done using a seed drill, a tool owned by very few (even large) farmers. Non-owners hire one either from other farmers or from the PACS in the village depending on availability. This method, including multiple rounds of tillage, is water- and energy-intensive, thus driving up costs. The Agriculture Development Officer of Moga informed me that as a result, the government has been subsidizing raised bed planters as a more efficient option but so far there has been little uptake. The sowing technique notwithstanding, wheat is overall a less water-intensive crop. Therefore, in contrast to paddy, the few hours of electricity supply is considered adequate by most farmers for its irrigation requirements. Application of chemicals and fertilizers is again usually done by one or two workers employed either by the day or on the basis of the acreage, or by *naukars*. Occasionally, farmers (with the exception of large capitalists) themselves might do this work.

⁸⁶ See Brar (2014) and Koshy (2007).

As is evident from the above, none of these operations are labour-intensive. Even harvesting is largely done mechanically using hired combine harvesters. Some farmers harvest the wheat manually, employing labour gangs and sometimes even families, including women and children. Once the crop is harvested, the remaining stubs are converted into *toori*, a kind of fodder for cattle, using a thresher. The average cost of manual harvesting (Rs 3,000 per acre) is double that of mechanical harvesting (Rs 1,500 per acre). The cost of manually threshing the stubs of the crop is also more expensive. Therefore, very few farmers, and usually only large farmers, opt for manual harvesting. A farmer who cultivates wheat over 80 acres said, 'It works out to be a lot more expensive due to the cost of labour and it takes too long as well'. The benefit of manual harvesting is that it results in more and cleaner fodder which can be used by farmers for their own cattle or sold in the market. Toori is sold not only within Punjab but also from Punjab to UP. It can be sold in the mandi or traders may come to the villages to make purchases. In 2015, untimely rains and hail damaged the crop, resulting in both lower wheat yield and lower production of toori. As a result, the price of toori increased from Rs 200-250 to Rs 400-500 per quintal.⁸⁷

A farmer's assessment of his own risk-bearing capacity and of the market for different crops weighs heavily in determining his cropping choices. Wheat is usually grown by farmers after their paddy crop. However, some farmers also grow wheat after the potato crop. This can happen if a paddy that matures faster (usually basmati) is cultivated. This is followed by a potato crop that is harvested in sixty days, i.e. by the end of November. This would then be followed by wheat. In other words, in the Khanna area, farmers grow wheat in the paddy-wheat cycle as well as the paddy-potato-wheat cycle. Moreover, a single farmer may adopt both of these cycles in different parts of his field. The strategy will differ from farmer to farmer and from year to year.

Moreover, since wheat is a staple food crop, not all of the wheat produced is sold in the market as most farmers keep some back for their own consumption. There are also farmers, both large and small, who grow only enough wheat for their own consumption on one or two acres. At the same time, there are farmers who do not

⁸⁷ The by-products and residues of crops are, therefore, also important for accumulation. These have an all-India dimension, which is beyond the scope of this thesis.

grow wheat at all. In the households surveyed, there were many large farmers who preferred to use their entire field for a longer potato crop or a cauliflower crop. When small farmers did not grow wheat, it was because they preferred to grow only fodder for their cattle. These farmers purchased wheat on the open market for their consumption, at the same price or Rs 10-20 per quintal more than the the MSP, which was Rs 1450 per quintal in 2015.

Costs/Profits

Table 7.3 gives a breakdown of the costs incurred in wheat production. Although, during the household surveys, farmers gave estimates of production costs in the range of Rs 6,000-20,000 per acre, the breakdown of costs from key respondents indicates that a more accurate estimate is Rs 12,000 per acre.⁸⁸ Wheat yield is usually about 20 quintals per acre. The government MSP for wheat is Rs 1,450 per quintal. As in the case of paddy, this was increased by only Rs 50 by the BJP and this was criticized by all farmers' unions. The profit from this level of yield and this MSP would be Rs 17,000 per acre. However, 2015 was a bad year for wheat due to untimely rains and the average yield was only 17 quintals per acre. At the MSP, therefore, the profit per acre would have been Rs 14,650. However, as will be seen later, there were considerable private purchases below the MSP that year, leading to even lower profits.

⁸⁸ This is higher than CACP A1 costs of wheat for 2011-12 (Rs 7,723 per acre) (CACP 2013).

Table 7.3: Costs of production and marketing of wheat per acre

Item	Cost (Rs)
Preparation of land (<i>bahai</i>)*	2,500
Seed	800
Urea and DAP	2,935
Crop chemicals**	700
Labour: spraying chemicals	1,000
i. Mechanical Harvesting (combine and thresher)	3,500
ii. Manual Harvesting (labour and thresher)	6,500
Total production cost mechanical/manual harvesting.	11,435/14,435
Costs to farmer in the mandi (cleaning and drying of wheat) at Rs 5.38 per 50kg bag	215
Total costs on wheat	11,650/14,650

Source: Own household survey 2014-15

*Higher than paddy because of cost of diesel used in multiple rounds of tilling

**Includes pesticides and weedicides

7.2.2 *Wheat Markets*

Government Procurement in Punjab

Arhtias in the grain mandi deal in all kinds of food grains, including wheat and so farmers deal with the same arhtia whether selling paddy or wheat; the credit relations discussed in the previous section carry over from one to crop to another and the same interest rate is applied to a farmer for both crops. This also means that if a farmer is unable to repay the credit through the sale of one crop, the amount owed is taken from the sale of the next grain crop he produces. Through this credit role of the arhtia, the paddy and wheat markets are connected.

Government procurement of wheat usually starts on 1st April and continues for two to three weeks. The arhtias begin preparing for the arrival of wheat in the mandi by late March. Groups of male migrant labour begin to return to the mandi by then. The system of wheat procurement is that all arhtia shops are assigned to a state agency or to the FCI. These agencies make purchases and store the wheat in their own or hired storage until the FCI orders them to supply a quantity for redistribution outside Punjab. Unlike paddy, wheat does not require any processing before redistribution by the FCI, therefore there are no intermediaries like rice mills involved in this process, and the process of government procurement is relatively more

straightforward. In other words, the FCI buys wheat from Punjab in order to export it to other states without any processing in Punjab.

Wheat storage is a major problem. Traditional covered warehouses are limited, and so open plinths are a common, but unsanitary, way of storing grains. Open to insect, fungal and rodent attack, images of rotting grain stored on open plinths often feature in national media. As a remedy, the central government started the Private Entrepreneurs Guarantee (PEG) Scheme in 2008 whereby private entrepreneurs build covered warehouses under a public-private partnership model, typical of liberalisation, in exchange for guaranteed hiring by the state agencies. A number have already have been built in Punjab, and a high-ranking official of a state agency told me that 20,000 mt (metric tonnes) of storage under this scheme is in the process of being approved for Khanna – even though Khanna already has adequate covered storage.⁸⁹ This scheme was also supported by the Shanta Kumar Committee Report of 2015.

Another aspect of the PEG is the building of modern steel silos for wheat storage. Here I briefly diverge from Khanna to further highlight the nature of changes being introduced in the wheat market. Before this scheme was launched, Adani Agri-Logistics (henceforth Adani) constructed state-of-the-art 200,000 mt capacity silos in Moga (and Kaithal in Haryana) in 2007 based on a contract with the FCI. Adani officials claim that Moga was chosen by the FCI since the storage shortage was the worst there. The silos are meant to store wheat for the FCI in exchange for a fixed rental. The idea was that farmers could come and deposit their grains at the silos directly, bypassing the arhtia. This would save the government having to pay commission to the arhtias and also reduce the hassles faced by the farmers in the mandi. Adani was even given a location adjoining the Dagra railway station to make it easy for the firm to service demand from FCI to supply wheat.

However, things did not go as smoothly as planned. An arhtia in Moga explained:

In the beginning, they could not even fill half their capacity because all the farmers used to sell through the arhtia. Adani tried to lure the farmers in through many ways; for example, by giving rewards like fridges, TVs and even tractors. However, for the first three to four

⁸⁹ A speculative reason for this contradiction could be that Khanna presents a profitable location for PPPs as it is well-connected and has high productivity.

years, it completely failed. Of 200,000 metric tonnes, it was only able to fill 75,000. The main motive was to eliminate the arhtias, eliminate the gunny bags, commission. The FCI wanted to use its own trucks to get the produce. But it did not work. But the State still had to pay Rs 200 per quintal to Adani for the silos. So now they get the farmers directly to deposit grains at the silos through the arhtia. Farmers like it because it takes less time – they are free within 20-25 minutes, and they get their payment from the arhtia.

This quote explains the liabilities that are being taken on by the State under such schemes. In this case, it is contracted to pay rent even when it is not using the storage. Some traders, however, believe that this is a risky proposition even for a large corporate firm like Adani. One flour mill owner stated, ‘Adani has actually taken a risk; if five years later the Congress government comes and says that it will not store wheat there, what will they do? It is a big risk.’ Most of all, however, this episode shows the power of the arhtias: as the key source of informal credit for farmers, they simply refused to lend to farmers if they deposited their grain directly with Adani. In other words, they marshalled their informal networks to protect their monopoly over mediating the sale of farmers’ produce vis-à-vis a corporate giant like Adani. The government was, therefore, forced to adapt the rules in a way whereby the grain could be physically deposited directly with Adani but still be considered as procured via the arhtia. Yet again, the arhtias succeeded in securing their commission and maintaining their power. But neither was this done at the expense of Adani.

Chapter 9 shows that interest rates are applied unevenly to different farmers based on the arhtia’s assessment of risk. Moreover, large capitalists borrow infrequently from arhtias. Nevertheless, it is important for all farmers to maintain the arhtias’ goodwill and cultivate trust because the latter are a source of emergency credit and facilitate the sale of not just wheat but also of any other food grains produced.

Private Trade in Wheat

There were 80 flour mills in Punjab in 2015, 7 in Khanna. Unlike in parmal, private actors in wheat thrived in Punjab both before and after the Green Revolution. However, private trade has been critically shaped by government policies, especially the shifts to liberalised policies in recent years. Before deregulation in 1986, flour mills were reserved as small-scale industries, could not be set up without

government licenses and were supplied with wheat by the FCI at fixed prices.⁹⁰ The flour produced by the mills was also bought by the FCI at fixed prices and sold to either consumers or mills that use flour, like bakeries. Mills and users of flour had no direct contact. Severe punitive measures could be applied to flour mills for not meeting the strict quality standards (Kapoor 2001). Given these constraints, it is not surprising that before deregulation, there were only 15 flour mills in the state. Post-deregulation, the FCI is no longer involved in the flour business, and the flour mills are free to manage their business privately, i.e. to procure the wheat from anywhere, and sell it on their own terms. Licenses are still needed but have become easier to obtain (ibid.). The FCI, therefore, regulates neither the quality nor quantity of wheat traded by the mills and, as a result, more mills have opened.

The flour mills produce *atta* (whole wheat flour), *maida* (fine milled and bleached flour), *sooji* (semolina) and *choker* (bran). Atta, the form in which wheat is consumed as a staple, is sold to wholesalers who then sell to individual retailers. Atta, along with maida and sooji, are also sold to large companies (e.g. Bonn and Cremica) that produce biscuits and other flour-based products, and to smaller biscuit plants. Choker is used by mills producing feed for cattle and, in the neighbouring hilly region of Himachal Pradesh, for horses.

Flour mills make purchases at the same time as the FCI and the state agencies, buying enough for six months of their requirements, an average of 100,000 bags per mill. After six months, they purchase wheat from the government under the Open Market Sales Scheme (Domestic). Under this scheme, wheat is released by the FCI at fixed prices in order to stabilize the market, especially in the lean season. Though not mandatory, wheat is released under this scheme annually, either because there is a shortage in the market leading to price rises and the State has to intervene to increase supplies, or the FCI has a surplus which it needs to liquidate.

According to traders, flour mills purchase 50% of the wheat arriving in the entire market committee of Khanna and 25% of that arriving in the main mandi. This is because the private buyers never go to the sub-yards in the rural areas to make

⁹⁰ Small scale industries, now renamed as Micro, Small and Medium Enterprises, in manufacturing are defined by the Government of India as those industries where the investment in plant and machinery lies between Rs 2,500,000 and Rs 100,000,000 (http://www.dcmsme.gov.in/ssiindia/defination_msme.htm).

purchases. At the same time, these proportions can vary from year to year. Table 7.4 shows the percentage of private and government purchases of wheat from the Khanna market committee as a whole over the last few years.

Table 7.4: Percentage of private and government purchase from Khanna Market Committee

	2012	2013	2014
Private Purchases	18	20	30
Government Purchases	82	80	70

Source: Market Committee Office, Khanna 2014-15

The president of the All India Roller Flour Mills Association, who also owns one of the oldest flour mills in Khanna and Punjab, explained these year-to-year variations:

When there is abundance in the market, and there is surplus, then wheat is sold at less than MSP in states like UP and Rajasthan. In Punjab, even in those situations, wheat is sold at MSP. In such a situation, mills in Punjab have to make purchases in these other states. If they do not, then the finished goods of wheat from those states will come into Punjab and harm us. Purchasing the wheat at MSP can make our processed goods more expensive comparatively.

Therefore, in years of surplus production in neighbouring states, the mills make limited purchases from the Khanna mandi. It is for this reason that flour mill owners fully support the Shanta Kumar Committee's recommendation of the withdrawal of the FCI from procurement in Punjab, believing that this would create more leeway for their business than they currently have. They believe that the state government does not give them any incentives and the overwhelming presence of the FCI stifles them. A mill owner said, 'The FCI is the biggest player in the wheat market; it is the biggest holder of wheat and therefore the market is shaped by them'.

But while mill owners criticize the high taxes in Punjab, market committee officials claimed that they, like basmati mills, are exempt from the payment of market fees. Overall, however, the fact that Punjab is a net importer of atta, i.e. it imports more *atta* from other states than it supplies to them, despite its high levels of production indicates something is amiss in the state policy for development of flour mills that

needs to be corrected (D. Sharma 2015).⁹¹ However, it is unclear if and how the state seeks to do this, and what this could mean for farmers. In terms of greater space in the procurement process for the private mills, the process may be detrimental for farmers (see below).

In 2006, the Khanna mandi also witnessed a different kind of private trade in wheat in the form of commodity futures trading. Varun Seth described it: ‘That year, the prices used to change by the hour. We used to have buyers from Bombay who sold the wheat on the NCDEX. That year the government had a hard time buying wheat; these Bombay traders bought everything at Rs 5 above the MSP; the government was unable to fulfil even their quota – they only managed to buy 10% of the wheat brought to market. That is why the government stopped commodity trading.’ On inquiring if that was better for arhtias than the current system, he replied, ‘What does it matter to us? Our *maal* (commodity) should get sold and transported out of the mandi as soon as possible and we should get the payments.’ Indeed, futures trading in wheat was banned in 2007 by the central government due to rising prices of wheat, to the great dismay of some farmers and the NCDEX (Joshi 2007; LiveMint Staff 2008). The ban was lifted in 2009 by the then newly re-elected central government (Reuters 2009), but Khanna mandi has not witnessed such trade in wheat again.⁹²

The 2015 procurement season in Khanna

In 2015, the official procurement season started, not on the usual date of 1st April but on 10th April, as untimely rains in February and March had led to a longer maturation period for the wheat. The season was inaugurated by Ajmer Singh Lakhawal, president of BKU (Lakhawal) and Chairman of the Punjab Mandi Board. However, after buying small amounts of wheat for a few days, the agencies stopped making purchases. The reason was that the wheat’s moisture content, extent of discolouration and percentage of broken grains failed to meet the FCI quality standards.⁹³ Farmers had been waiting in the mandi for days and there were unsold heaps of wheat lying everywhere, even as new farmers continued to bring in trolleys

⁹¹ Atta produced from wheat grown in Punjab is not considered to be particularly good quality and the middle classes prefer better quality atta from other states, especially Sharbati from MP (D. Sharma 2015; interview with flour mill owner).

⁹² I have been unable to explore the reasons for this as a part of this research.

⁹³ The acceptable level of moisture for wheat is 12%.

of wheat. In fact, even before the official date for the start of procurement, a Pungrain official anticipated that the purchase period would be ‘very tough’.

As government procurement remained effectively stalled for over a week, on April 20 and 21, there were demonstrations in front of the Pungrain office in the mandi, attended by members and leaders of the farmers’ union, arhtia association and labour union in large numbers. They were also particularly upset that while the central government had relaxed quality standards in the states of Haryana, Gujarat and Rajasthan, the same had not been extended to Punjab. NH1 was blocked by the arhtias arguing that, ‘this is like British rule; we will not be heard unless we do something drastic’. A popular slogan was ‘*dhakkebaazi band karo, khareed ka parbandh karo*’ (stop swindling; make arrangements for purchase). Referencing the Shanta Kumar Committee Report, arhtia leaders also cited ‘the arrogance of the Modi [central] government’ and the particular neglect of Punjab and its farmers. Yet again, the mandi emerged as the platform to reference the status of centre-state relations with respect to Punjab and a space for arhtias to manipulate (see Section 7.1).

State agency officials, however, refused to make purchases and insisted that they would only start procurement once the central government sent a notification relaxing standards. One agency inspector agency explained:

We are reluctant to buy as it would be at our own risk. There is the issue of ‘gain’. Wheat normally gains moisture when the monsoon comes, around July. [This increases the weight of the grain while the quantity remains the same.] As a result, any dispatch to the central pool after 31st July involves extra dispatch, i.e. as a rule, an extra 350g per kg has to be given as part of the central pool. However, once rain falls on a full-grown standing crop, the crop does not acquire moisture during monsoon. But we still have to give 350g extra. That is a loss for the warehouse and the inspector. In any case, the quality of the grain has become such that there will be a problem in storage.

In other words, in the absence of a notification lowering quality standards, the state agency would have bear losses. Moreover, officials would have had to procure at personal risk: both in the FCI and state agencies, the individual inspectors and officers are penalised for any loss of or damage to grain. Therefore, understandably, they are reluctant to make purchases that do not meet the quality standards.

In the end, and in another illustration of the political power of the state's farmers, the relaxation of standards was extended to Punjab as well. This meant that the FCI would procure wheat from the mandis but at a rate that was Rs 10 less than the MSP, i.e. Rs 1,440 per quintal, with the state government paying the difference. However, the relaxation order only came a fortnight after the official procurement season started. During this time, some farmers were forced to make distress sales to flour mills at Rs 20-30 per quintal below the MSP. Formal records, however, show that the crop was sold at the MSP since, by law, the mills cannot purchase below the MSP. Flour mills in Punjab buy at or above the MSP when the FCI is buying at MSP. If the FCI refuses to pay the MSP or declares the crop sub-standard, the flour mills pay less as well. The arhtias claim they have to do so in order to clear their *phads* and make space for other farmers' crops. There were cases where farmers waited up to three days in the mandi for their crop to be sold, and in such circumstances, they were willing to accept the slightly lower rate. Every arhtia in the mandi facilitated such distress sales. Varun's uncle, Kamal Seth said, 'If it happens in the next shop and not in ours, our farmers will say '*bau mein dum nahin hai*' (my arhtia does not have it in him to get my crop sold). These are times of competition.'

Again, much of this happens based on the close relations between the arhtia and the flour mill owner. In fact, this is true even for a 'normal' year. The flour mills that purchase from the Khanna mandi are all located in Khanna, and since they are only 7, sales are made directly, even though in government records they are recorded as auctions. Different mill owners have relations with different arhtias through whom they source their supplies.

7.2.3 Conclusion

A study of wheat in Punjab has to acknowledge that it is both a food and a cash crop. In other words, its production and marketing by farmers involves consideration of household consumption as well as its returns to investment. And, in a clear indication of how deeply commercialized agriculture is, there are some farmers, large and small, who prefer to buy wheat rather than grow it.

In the market, the arhtias continue to profit through the fixed commission on wheat which came about as a result of the market dynamics as defined by the central government through the FCI and the implementation of the MSP since the beginning

of the Green Revolution. This continued even after deregulation of the flour mill industry in the late 1980s and continues to impact the cost at which private flour mills procure wheat, even though deregulation has created greater space for private trade. Consequently, the quantity procured by mills in Punjab from Punjab depends on the relative prices of wheat in the neighbouring states of UP and Rajasthan.

In 2015, an aberration in the weather exposed tensions in this seemingly uncomplicated process of government procurement. The constraints of the FCI and state agencies came to light, while private flour mills were able to benefit from the situation. The informal relations between arhtias and mills again proved crucial to managing the situation. Many wheat-producing farmers, however, had to face the brunt of the situation.

There is little in the wheat market as it exists now that allows for a differentiated impact on the different classes of farmers, except for credit relations (see Chapter 9). This reflects the fact that the market does not differentiate between types of wheat and the MSP is well administered. That does not make it less important for accumulation though; in fact, like pormal, due to a guaranteed MSP, it provides a minimum level of gross income and therefore, supports profits and/or subsistence.

7.3 Potato

This section shifts from the terrain of food grains to vegetables, focusing on potato. As noted in Chapter 5, potato is as important for accumulation by capitalist farmers as wheat and paddy in the field area. It is widely referred to as a crop that can ‘make or break’ a farmer and this section explores how this might be the case.

7.3.1 Potato Production

There are three types of potato production in Punjab: seed potatoes, table varieties and processing varieties. Seed potatoes can be of any potato variety. Table potato refers to the potato ordinarily consumed in households. Processing varieties are those processed into chips, powder and other potato-based food products. Most of the farmers in Paunpura and neighbouring villages usually grow table varieties such as Kufri Pukhraj and Kufri Jyoti. In Rattankalan, only 50-60% of farmers cultivate potatoes, usually processing varieties like Lady Rosetta (LR), Chipsona 1, 2 or 3, or FL1533. These three types of potatoes have different markets and trading networks, but their production processes are similar.

In Punjab, potato is sown in late September or early October, following the paddy crop. As mentioned in Section 7.1, this timing is what makes short duration paddy varieties important for potato. The land for the cultivation of potatoes is prepared mechanically, by using the leveller (*tavi*) thrice and the disc harrow (*suhaga*) multiple times in order to break up any lumped soil (*dali*). Seeds are sown using a planter or sower and three to four labourers are needed. Some farmers own or hire a rotavator, which sows seed and levels the field at the same time. Potato seeds are replaced once every two to three years by farmers. Seeds are bought from the old and established seed farms of Jalandhar or from corporate seed companies; one acre of potatoes requires 15 quintals of seeds.

The potato crop requires several rounds of application of fertilizers and crop chemicals which constitute a major part of the production cost. On asking farmers about costs, the first response invariably would be *‘aloo che dawaiyan hi inni paindi hain’* (potato requires so many chemicals). Care in the application of these chemicals was argued to be crucial for a decent potato crop. Some smaller farmers who grow potatoes may do some of this work themselves but mostly it is done by labourers.

However, farmers who grow potatoes are more likely to employ (a greater number of) naukars than those who cultivate only wheat and paddy (see Table 7.5).

Table 7.5: Number of naukars employed by farmers based on different crop cycles (a)

Crop Cycle	No. of Naukars Employed				Total Households
	None	1	2	3 or more	
Paddy-wheat only	23	5	1	1	30
Potato included*	11	15	5	3	34
Sample size (n)					93

Source: Own household survey 2014-15

*This includes 8 households that also cultivate cauliflower which is an extremely labour-intensive crop (see Section 7.4).

Potato harvesting is extremely labour-intensive. A reaper (either owned or hired at Rs 1,500 per acre) pulls the potatoes from the soil, but many labourers (Bihari male migrants or local SC women) are needed to pick these and put them in jute bags. The labour cost for this process is around Rs 3,000 per acre; there is an additional labour cost of Rs 15 per 50kg bag for grading the potatoes. According to Harman Singh, a small capitalist farmer:

We call the labour on the phone that we are getting the potatoes picked. That is how they come. After that, there is work for some crop or the other – sowing sunflower, then harvesting wheat, transplanting paddy. They leave only after the paddy sowing season – they end up staying for 4-5 months.

It is not surprising then that farmers themselves are quite involved in the supervision of this process. One of my respondents who cultivates potatoes over 60 acres worked on the farm from 4am to 11pm every day at harvest time and employed a total of 50 labourers for picking, grading and storing. This was slightly more than usual since by this time prices were crashing and there were untimely rains, and so the process had to be hastened. However, it is common to have labour gangs of 6 to 10 men or women per acre for potato picking.

Potatoes may be harvested at three different times, and different harvests correspond to different market dynamics. The first harvest is in December; this is the 60-day crop and is colloquially known as *kacha aloo* (raw potato). Processing varieties are never harvested at this time as they are too small and the sugar content too high for processing. This first harvest also does not allow seed-size potatoes to develop. Only

table varieties are harvested as *kacha aloo*. The crop yields 60 quintals per acre and fetches about Rs 1500 per quintal or more.

The next harvest, in January, is the 75-80 day crop known as *pakka aloo*. Average yields are higher at 80 quintal per acre but prices are lower, ranging from Rs 700-1,200 per quintal. So, it is possible that farmers earn more with the first harvest even though the yield is less. At the same time, 15 additional days implies extra costs of chemicals and of labour to apply them. This second harvest is also when seed potatoes are harvested, although the yield is somewhat lower. In order to make seed potatoes, the stem of crop which is full of leaves is cut, and the crop is left under the soil for about a fortnight. Farmers keep whatever amount they need and sell the rest on the open market; prices depend largely on demand-supply dynamics, i.e. the available stock and anticipated demand of seeds in the next season. Processing varieties also start being harvested at this time, and fetch an average of Rs 950 per quintal.

The last harvest starts in the second half of February; this is the 90-100 day crop. By this time, the yield of table varieties increases to 150 quintals per acre, while that of processing varieties increases to around 85 quintals per acre. Both varieties have similar costs but the latter fetch better prices. By the time of the last harvest, however, the potatoes from UP, the largest potato-producing state in the country, have arrived on the (national) market in large quantities and prices fluctuate thereafter depending on the yield in UP and the country overall in that particular year. Table 7.6 summarizes the harvest cycles and processes for the different types of potatoes in the field region described above.⁹⁴

Not only are the prices of potatoes uncertain, they are also quite volatile. One farmer lamented, ‘Once it rained and the trader called for 200 *katte* [bags] of potatoes and offered Rs 160 per bag. Usually the rate is about Rs 100-110. Then the trader called from Malerkotla and said that the rate in the mandi is Rs 200. By the time we took the *aloo* to the mandi the rate had fallen to Rs 140. There was a loss of Rs 20 [per quintal].’ This volatility leads many farmers to describe potato farming as ‘*satte waali kheti*’ (farming which is like gambling). Moreover, since potatoes require more care in the production process as well as in terms of mapping the market,

⁹⁴ All figures are estimates derived from interviews with several farmers and traders.

potato-growing farmers often refer to farmers who grow only wheat and paddy as ‘*vehle*’ (lazy and free). Decisions on how much potato to grow, which one(s) and when to harvest depend crucially on considerations of income as well as the cropping schedule as a whole. Note that the first harvest is followed by wheat, the second by maize, the third by sunflower and, if the harvest is further delayed, by *moongi* (a kind of pulse).

Table 7.6: Harvesting cycles and prices for different types of potatoes

Type of potato	Harvest	Yield (per acre)	Prices (Rs per quintal)
Table	December	60	>1500
	January	80	700-1,200
	February	150	As low as 150-200
Seed	December	N/A	N/A
	January – February ⁹⁵	60-80	Average 800-900 Range 400-3,500
Processing	December	N/A	N/A
	January	75-80	Average 950 Range 400-3,000
	February	85-90	

Source: Own fieldwork 2014-15

Costs/Profits

So far we have seen that the income a farmer may earn from potatoes can vary greatly depending upon the choice of crop and harvesting decision. At the same time, a farmer who grows potato one year might reduce or stop cultivation the next year, or simply change the combination of varieties grown. Nevertheless, here an attempt has been made to estimate the profit from potatoes in an average year.

⁹⁵ The second and third harvest cycles are merged into one for seed potatoes as they are harvested within a certain time so that they do not do increase too much in size, even though there are variations of days and weeks among individual farmers based on when they have sowed the crop, weather and soil conditions etc.

Table 7.7: Costs of production of potato per acre

Item	Cost (Rs)
Preparation of land (bahai)	5,000
Seed*	25,500
Labour: sowing	2,000
Urea and DAP	5,900
Pesticides	7,800
Labour: spraying chemicals	2,000
Labour: harvesting	3,000
Total production cost	51,200
Total production cost if potato reaper hired at Rs 1500 per acre	52,700

Source: Own household survey 2014-15

*Average rate x 15 as one acre needs an average of 15 quintals of seeds

Costs of cultivating potatoes are extremely high; as one farmer put it, '*aloo par toh kharche hi kharche hain*' (there are countless expenses on potatoes). Costs vary by duration of crop or timing of harvest, but the major determinant is the cost of seed potatoes which can change significantly from one year to the next. So, while the average rate is Rs 1,700-1,800 per quintal, in 2014-15, it was Rs 2,200 per quintal. Many farmers argued that their annual cultivation cost per acre lay in the range of Rs 30,000-50,000. However, a breakdown of the average costs puts this rate at closer to Rs 50,000 (Table 7.7). To some extent, this is towards the higher end of the range because the seeds were more expensive in 2014-15 as indicated above. This breakdown of costs excludes estimation of grading costs as these would vary by yields. Similarly, marketing costs vary depending on the sale channel (discussed below). It should also be noted that potato cultivation intersects in important ways with land-lease dynamics in the villages (see Chapter 8).

2014-15 was not a good year for potato-growers in Punjab. Untimely rains in February and March delayed the harvest of the fully mature crop and ruined acres of potatoes, thereby limiting supply. However, this did not prevent a drop in prices because there was a bumper crop across other potato-growing states in the country (partly due to the large area under cultivation and partly due to an adequately cold winter). Production was also very high in 2013-14 but the crop in Pakistan had not done well and it imported potatoes from India in large quantities. In 2014-15, however, there was a bumper crop in Pakistan. The government gave some tax

rebates to those exporting potatoes but there were no buyers; farmers had to sell at distress rates, if at all. Cold stores were full to the brim and there were heaps of potatoes lying everywhere, getting closer to rotting as summer approached.

Admittedly, in 2014-15 some farmers who sold their crop after the first harvest received as much as Rs 1,400 per quintal. But, by mid-December, farmers were only getting Rs 750 per quintal for table varieties. If we assume that in 2014-15 the total production costs until the last harvest were higher at Rs 60,000 due to higher seed potato prices. Now, assuming the cost incurred on the first harvest to be Rs 50,000 (owing to less crop chemicals applied) and the yield to be 60 quintals, this would mean a decline per acre from a profit of Rs 34,000 to a loss of Rs 5,000 in just a fortnight. Prices continued to fall and by the last harvest, were as low as Rs 200 per quintal for table varieties and Rs 400 per quintal for processing. With yields at 150 and 85 quintals per acre respectively, and costs at Rs 60,000, this meant per acre losses of Rs 30,000 and Rs 26,000 respectively. However, the previous years had been quite profitable. Prices for table and processing varieties in 2013-14 averaged around Rs 1,100 per quintal, or per acre profits of Rs 115,000 and Rs 43,500 respectively (at costs of Rs 50,000 per acre).

This, many say, is a regular cycle with potato. Once every 3-4 years there is a drastic drop in prices. In my understanding, because in some years potato-growers, especially the large ones, are able to make such large profits, they can sustain the shock of a bad year. Smaller growers may or may not be able to do so. Indeed, smaller farmers are less likely to grow potatoes since the costs of cultivation are very high. They can do so only on the back of considerable amounts of credit, which exposes them to indebtedness and I heard of many cases where small farmers had to sell their land due to losses from the potato crop. Table 7.8, based on data from the household survey, shows that none of the potato-growing farmers are petty producers.

Table 7.8: Potato-growing farmers by class

Class	Number
Petty Producer	0
Small Capitalist	6
Large Capitalist	25
Total	31
n	93

Source: Own household survey 2014-15

Large capitalists, on the other hand, can incur these expenses, take risks and manage them in a way that this becomes a crucial pillar of their accumulation strategies. In a strategy that is as much about maximising profit as it is about minimizing risk, no large farmer grows only one kind of potato over his entire farm or harvests them at the same time. If they grow only one kind, they will grow it only on part of their land, leaving the rest to wheat-paddy rotation. As the wife of a large farmer once poignantly remarked, while looking at their impressive farmhouse at the edge of the village, '*asi ta aloon te hi aa ghar khada kitta hai*' (we have built this house on potatoes). Farmers with smaller holdings, for the obvious constraints of land, are less able to exercise these different options.⁹⁶

7.3.2 *Potato Markets*

The foregoing section has already given a glimpse into the complexities of potato markets. Here, the markets for the three different types of potatoes will be delineated. It should be recalled here that that the wholesale market for potatoes and other vegetables is different from that for grains; it is the sabzi mandi, described in Chapter 6.

Table Potatoes

Table potatoes have a large domestic market and they are sometimes also exported to countries such as Pakistan, Sri Lanka and Russia. Punjab, however, is argued to suffer compared to states like Gujarat and West Bengal where they are exported through ports since it does not have a coastline.

⁹⁶ This reference to building houses points towards an interesting question about whether it should count as a productive or unproductive investment. Suffice it to say that it is difficult to judge empirically when some investments should count as 'accumulation' and when they should not.

In Khanna, table potato production started four decades ago when two families from Jalandhar district, famous for its potato cultivation, moved to a village close to Khanna town and started growing them. One of these families has now sold off its land and moved to Chandigarh while the other continues to live there. Other farmers, large and small, followed suit. Today, a handful of adjoining villages lying between Khanna, Samrala and Khamanon are the hub of table potato cultivation in the area. Farmers and traders argue that this consistent increase in the volume of production has been a result of farmers emulating their neighbours in pursuit of higher profits. The increase may also be a function of increased demand, but this could not be verified.

Until fifteen to twenty years ago, table potato farmers in Khanna went to the mandi in Delhi to sell their produce; today, however, the entire produce is sold from the field itself. The crop is sold to the *vapaari* (trader) who is usually an arhtia in the sabzi mandi at Khanna or elsewhere in Punjab. These traders may sell the potatoes on to traders in even larger mandis or at their own shop. Over the past decade or so, a handful of farmers in some of the villages have also become traders. They connect farmers with arhtias in various mandis and take a commission, although they are not licensed. Sometimes, in order to lock-in the supply, they purchase the produce at their own expense and then sell it when prices are better or when the demand arises. The arhtias who buy directly from the farm and the farmer-cum-traders basically work as brokers for a commission of Rs 5-10 per bag.

Purchasing directly from the farm also saves traders having to pay the market fee due from the buyer when the crop is sold in the mandi but means a loss of revenue for the Market Committee. For farmers, even though this mode of sale means that they get slightly lower rates than in the mandi, it saves them time and the costs of transportation, as well as the hassles of selling in the mandi and dealing with the arhtias. A farmer complained: 'In the sabzi mandi, there are supposed to be 50kg of potatoes in every bag. But the arhtias make us put 51kg in every bag and only pay us for 50kg because they say that the bag weighs 2kg. They send the extra potatoes to Delhi and get the full rate from the trader.'

It is understandable then that farmers prefer to sell directly from the farm. The farmers contact traders/arhtias agents in various mandis at harvest time and sell

wherever they get the best price. The expansion of cell phone connectivity has, needless to say, played an instrumental role in shaping the marketing process in this way.

Traders argue that the production of table potatoes in this area is so high that if the whole crop arrived in the mandi at the same time, prices would drop drastically. The increase in the number of large sabzi mandis in north Indian states such as UP and Rajasthan and the expansion of cold storage facilities across all states are closely related to these changes as there are now many markets to which the produce can be channelled. The cold storage sector was also deregulated by the central government in 1997 (Minten et al. 2014).⁹⁷ Notably, most cold stores in the area are owned by wealthy, capitalist farmers who have diversified into this business. This is particularly true of newer cold stores as land is so prohibitively expensive that even most traders cannot take the risk of making such investments.

Farmers and traders explained that there was no difference between the prices given to small and large farmers in this market, as long as the quality of the crop was the same. Nevertheless, it can be argued that the former are disadvantaged in these markets owing to a lower capacity to hold stocks, negotiate better prices, and access to fewer marketing networks.

Seed Potatoes

Punjab dominates the national market for seed potatoes; the agro-climatic conditions of the state are such that there are certain pockets where disease-free seed potatoes can be grown. In fact, seed potatoes for the entire country are grown in Punjab. The Doaba region, i.e. the area between the Rivers Beas and Sutlej, especially the districts of Jalandhar and Hoshiarpur, have conditions that are ideal for this and some farmers refer to seed potatoes as being ‘God’s gift’ to this region.

Seed potatoes were originally grown in Himachal Pradesh and the Doaba farmers bought their foundation seeds from there in the 1960s. However, the enterprising Doaba farmers soon overtook Himachal and the area has been the leading seed potato producer since the early 1970s. In this, they had systematic support from the Central Potato Research Institute which has a regional station in Jalandhar.

⁹⁷ They also argue that this has allowed farmers in Bihar, especially large farmers, to negotiate potato markets more effectively.

Today, seed potato is grown by almost every farmer, big and small, in Doaba; around 90% of potato grown in this area is said to be seed potato. However, there are about 15-20 farmers in the region known as 'the potato kings'. These potato kings own and lease-in thousands of acres of land in the region on a yearly basis and conduct their operations like corporations, although they continue to call themselves 'farmers'. They have their own cold stores, tractors, and combine harvesters, etc., all of which are stationed at different locations adjoining their lands (also see S. Singh 2012). Since seed potato is only a three month crop, they also variously grow paddy, maize seeds and/or sunflower seeds and market them either in the APMC mandi or through their own company networks. Key to their expansion has been their organisation into associations which have been able to negotiate benefits from the State and from private companies.

Even though the Doaba region dominates this market within Punjab, disease-free potato can also be grown in Khanna. The most important consequence of this has been the entry of agribusinesses in the region for seed-to-seed contract farming, especially of processing varieties. This is another very clear post-liberalisation development. There are several stages of seed development, namely, Gen0 to Gen3. Under seed-to-seed contract farming, companies develop the seeds until Gen2 and then pass it to the farmer to cultivate to Gen3. Contract farming of this kind is especially widespread in the villages around Amloh, a town only 10km from Khanna. Three big companies are involved in this: PepsiCo, Mahindra & Mahindra, and Technico. The latter two do it only for selling the seeds; they companies grow seed for table and processing varieties, and have their own marketing system that reaches out to traders and farmers. However, PepsiCo does it for its own potato-processing requirements. It gets the seed grown in Punjab and then sends it to other states such as Gujarat or West Bengal where they have different types of contracts with farmers to convert the seeds into fully-grown processing potatoes with certain quality criteria. The seed-to-chip form of contract farming, i.e. where the final product is a fully mature processing potato, is not done in Punjab since its extreme winters makes the crop more vulnerable to frost and thus rotting.⁹⁸

⁹⁸ In the Doaba region, the potato kings have also started contract farming with smaller farmers in the past four to five years.

The exact terms of contract farming vary from one company to another. However, the broad contours in each case are as follows: the farmer purchases the requisite amount of seeds from the company – the company takes a signed cheque for this amount at the time the contract is finalized (although it is unwritten); it then sells a package of pesticides and fungicides to be applied to the crop or recommends specific brands to the farmer; the farms are regularly visited (without charge) by agronomists from the company to assess how the crop is developing; once the crop is harvested, it is quality-graded by the company into four types and payment is made accordingly.

Notably, at least two of the three companies have a clear preference of working with medium to large farmers. One highly placed official explained:

Small farmers work very hard but find it very difficult to survive. If there is even one shock, they are easily affected. The big farmers can cope with shocks. So, we try to work as much as possible with big farmers; we prefer not to work with anything less than five acres. Sometimes we make an exception if the farmer is very sincere and keen.

Many farmers have poor experiences with contract farming, after which they discontinue it. One farmer explained:

These companies are not for farmers; contract farming has many problems. The company sees its own profit. It takes a blank cheque in advance from the farmer. The seed is sold to the farmer. If the farmer does not make payment, the blank cheque is used by the company. When grading happens, they do not take the smallest and biggest potatoes [the company wants 'standard' sized potatoes] but they write the full amount for the seeds sold on the blank cheque anyway. If there is a problem with the seed, they do not lift the crop but take payment for the seed anyway and say that you can sell the crop on your own. This has actually happened to me with one of the companies. With another – there is a disease called late blight which was not there on our farm; but their doctor came and said that it is there. Pepsi refused to make payments for our crop; it said it will do so after a year. We had to store it and I had to bear the cost of the potatoes that were ruined; the potatoes that were okay were bought by the company. Another company also works in this area but after having a bad experience with two companies, I did not want to try a third one.

Further research showed, however, that the story is more complex. Although companies sometimes dishonour contracts, so do farmers, both usually in response to

open market prices. Companies may do so when prices are considerably lower than the contracted rate, farmers when the prices are higher. According to a key farmer-respondent, Gurjeet Singh, who had done contract farming for two years before leaving it:

Our experience was okay. There is both benefit and loss in it. The couple of times we did it the market rate was higher than the contract rate so it was a loss for us. The main thing with potatoes is demand. If the price in the market is lower, the company also says this and that – sugar is not okay, grading is not okay – and buys less from the farmers.

A similar assessment came from a respondent who is a farmer as well as trader and cold store owner:

The thing with contract farming is that it gives you a limited margin, unless nature is too unkind. Last year the profits in the open market were much higher than what people who grew on contract got but it is not that they did not make any profit. So many people left contract farming because of a lower level of profit, but this year there was a *manda* (recession) and those doing contract farming at least got a secured rate; the others had to experience high levels of losses.

These testimonies show that contract farming is one of many cropping strategies farmers use to accumulate, each farmer having his own assessment of what would work best for him.⁹⁹ As a result, every year there are some farmers who leave contract farming, and others who join. In the words of one, '*bas topi ghoomti rehti hai*' (the circle keeps rotating, that's all). But contract farming can also be unstable due to reduced disease resistance in some areas. PepsiCo, for example, moved much of its contract farming work from the villages around Khanna and Amloh to those around Nabha in Patiala district.

An important development in the Amloh region in recent years has been the establishment of seed farms by large potato-growing farmers. These seed farms spread over 100-150 acres and, like their much larger counterparts in Doaba, they specialize in seed potato cultivation and trading. Often they grow seeds patented by the agribusinesses. The story of how these farmers acquired the seeds to start their business is usually along the lines of they do contract farming with the companies

⁹⁹ One large farmer who does both contract farming of seed potatoes and cultivation of processing varieties said that he continues with a small acreage of contract farming for PepsiCo because the company prioritizes contracted farmers when purchasing processing varieties.

but retain some seeds illegally, using them to grow their own seeds in subsequent years. Developing seed farms necessarily entails marketing and trading in seeds as well because seeds of different potatoes are required in different states at different times. Some respondents said that these farms were running losses but I was unable to verify this. On the other hand, it is clear that huge profits can be made in this business. Seeds like FL1533, for example, fetched as much Rs 200,000 per acre even in 2014-15 when prices in the potato market were crashing. Some large farmers who do not have seed farms per se also produce these owing to the profits to be made.

It cannot be stressed enough that the development of seed farms and potato trading of this type is crucially linked to the growth of the potato-processing industry in India. Moreover, the success and growth of seed farming in Punjab is tied to the production schedule in different parts of the country. The cold store owner quoted above also owns a seed farm. He explained:

The point is where is it that seeds grow into potatoes out of which good quality chips can be made. LR works very well in Punjab. But if we grow FL1533 here then it will have a very high sugar content. But it grows very well in Maharashtra. FC3 is grown a lot in Una. Chipsona grows well in UP and MP. Seeds are sold to these areas accordingly. There is another thing; when the potato crop is harvested in Maharashtra, there is no potato in the cold stores or in the farms here.

[And when is that?]

In Bangalore, the sowing of the potato crop has already started [i.e. in May]. In Maharashtra, sowing will start in June and the yield will come in October/November. By then our stores will be empty or the stocks that will be there will not be fit for making chips. The companies, therefore, buy the potatoes from them at a good rate, and the farmers in turn take the seeds from us at high rates as well.

These seed potato farmers may not be as big or as powerful or even as numerous as their counterparts in Doaba but they have displayed remarkable enterprise in accumulating through new opportunities presented by liberalisation. Companies also recognize this potential, as evidenced by the 'service model' of procurement started by Mahindra about four years ago. Under this model, farmers growing seeds on a minimum of 50 acres can choose whether or not to sell their produce to the company (assuming it meets their quality requirements) and are free to source their breeder

seed from wherever they like. Jagjit Gill, a farmer who engaged in this and found it quite profitable, said:

See, 10,000 pieces of mother seed or mini-tubers [of seed potatoes] costs Rs 9,000; these can be sown over 3 *kanals* [0.375 acre]. The next year these seeds will multiply and we can use the same to expand the area, and some extra seeds can be bought; the seed has to be given to the company only in the fourth year [which is when the big harvest is taken]. Because the seed can multiply over a large area, the cost of seeds comes to only Rs 12,000-13,000 per acre. Then, if the seed is sent by the company to southern states or MP or Maharashtra, our seeds are filled in their bags and packed directly from the field. If it is sold at Rs 20 per kg or Rs 200 per quintal, then the company takes Rs 40 as commission and gives Rs 160 to us; if we consider that Rs 20 is the storage rent or miscellaneous charges we pay, we get Rs 140 per quintal [which is more than the average market rate]. So there is more earning. Also, if we do not like the company rates, then we can simply sell it in the open market; we are not bound.

Again, it is evident that for large capitalist farmers, such arrangements with agribusiness firms are one of many channels they use in order to maximize their profits.

Processing Potatoes

Not all processing varieties are grown only as seeds in Punjab, or in the Khanna region. Varieties such as LR and Chipsona are also cultivated as fully mature potatoes by farmers, especially by farmers in Rattankalan. These are sold to large potato-processing companies as well as on the open market which then sells on to smaller potato-processing firms.

Earlier I mentioned that companies do not procure processing varieties from Punjab through contract farming. However, they have other kinds of arrangements. PepsiCo, for example, declares the average rates that it will give for the season; the company also sends agronomical assistance to any farmer if it knows that the latter could be a potential seller but this is not a binding contract for either party. Once harvested, the company buys the produce only if it meets its quality standards and the farmer sells it only if he feels the price is better than that on the open market. However, the farmer first needs to get the potato sampled and approved by the company's local

test centre and then take it to the processing plant located in Channo (over 50km from Khanna city) where the crop is tested again before being bought.¹⁰⁰

Most farmers who sell through this channel argue that the prices are good. In 2014-15, even though prices on the open market had crashed to Rs 400-500 per quintal, the company was still paying Rs 700-800 per quintal. At the same time, it gives farmers the option to sell the crop on the open market when prices are higher. According to Kulwinder Singh, a farmer who has been cultivating processing varieties for the past 15-20 years, 'Usually we sell the processing variety to Pepsi at Channo. The company declares season-wise rates. But this time the company got the potato cheaper on the open market so they did not buy ours. But we also do the same; if we get higher rates on the open market, we do not go to Channo'.

It is clear though that this marketing channel involves logistics that work as a deterrent. A large capitalist farmer in Paunpura did it for a few years and stopped. He said, 'Earlier, for a couple of years, I used to take my Chipsona crop all the way to Channo. Whatever they found acceptable, they took and paid the money. But then a few years ago, I had to bring back my entire crop from the factory after waiting at the gate for five days. Farmers did not know but they [PepsiCo] suddenly declared that the last day for accepting potatoes was 31st March. I arrived on 1st April. They had closed the gate and I waited outside for four days and then returned on the fifth with my entire crop. Now they ask me to grow it again for them but I do not; I do not wish to go to Channo to sell.' Clearly, something that is a disincentive even for large farmers would be even more inaccessible to smaller farmers.

Other processing companies, large and small, within and outside Punjab, also procure processing varieties from the farmers. They do this through arhtias-cum-traders, as in the case of table potatoes. In this, the arhtias of Khanna sabzi mandi are not in direct contact with companies as their operations and scale of work is much too small for companies to deal with them directly. Companies have direct contact with larger vegetable arhtias in larger mandis (e.g. Delhi, Chandigarh or Ludhiana), and give them orders for certain amounts. These arhtias then contact traders in

¹⁰⁰ PepsiCo calls this system 'forward contract'. However, this is a colloquial use of the term, the more widely accepted meaning of which is akin to the system of contract farming practised in the region.

smaller mandis such as Khanna to send smaller amounts. Arhtias in Khanna in turn could source the consignment on their own or by partnering with other arhtias.

Farmers who sell processing varieties in this way find it very convenient, although there is a risk of an arhtia not paying them on time or in full. This is not very common as arhtias and traders need to build a reputation in order to remain in business, but it certainly happens. In Rattankalan, three farmers sold their processing varieties, together worth Rs 1,600,000, to the same trader. One of them had to cut short one of our scheduled meetings because he and the two other farmers had to meet the trader in question. My respondent's share of the sale was Rs 600,000. His mother said, 'The sale happened one month ago but the *vapaari* (trader) has still not paid them. Whenever they call him, he says he is not there or he is in Gujarat. Today, he said "Call me at 11.30 am", but he is not picking up the call'. His wife added:

The trader has sold their potatoes for a profit and instead of paying them, he has used the money to buy a plot for Rs 6,000,000... We hope we get the money. We had to pay Rs 4,500 per acre as labour expenses even though we have not yet received the money from the crop.

The risk lies in the fact that when the trader buys from farmers in the field, he only gives the farmer a *kacha* (informal) receipt. The only *pucca* (formal) receipt the farmers have is from the *kanda* (weighing station) where they get their crop weighed. There is no formal or legal proof that the crop has been sold to a particular trader. Nevertheless, that this is probably a one-off incident is testified to by the fact that most farmers growing processing varieties in Rattankalan and the handful who do the same in Paunpura prefer this channel to sell their crop.

7.3.3 Conclusion

This section has shown that cultivation of potatoes is extremely capital-intensive. This serves as a disincentive to petty producers and, to a lesser degree, for small capitalist farmers to invest in the crop. It is not just the production cost but also the nature of the potato market that contributes to the class specificity of this crop.

Unlike wheat and paddy, potato is a strictly 'market-driven' crop, i.e. the State plays no role in either setting its prices or in its procurement. Different types of potatoes have different markets which have different channels for sale. Corporate agribusinesses are closely involved in the market for seed potato and processing

varieties. In fact, in many ways, they have created these markets. But these complexities make it more time- and resource-intensive for farmers to navigate them. Even the production process, especially in terms of harvesting schedules, has to be geared to these multiple market variables. In a further difference vis-à-vis paddy and wheat, the sale of potato is not tied to a particular trader through credit of any kind, except in the case of contract farming. This leaves farmers free to negotiate market processes on their own.

For petty producers, it is nearly impossible to make a profit on this crop. Smaller capitalist farmers are able to take the risks but are vulnerable to heavy losses and indebtedness. On the other hand, many large capitalist farmers have succeeded in using the crop as a route to accumulation. The evidence presented here suggests that some kinds of seed potato farming *may* be more profitable than other kinds of potato farming.¹⁰¹ These farmers have also profited from diversifying into non-farming businesses linked to the crop such as trading and cold storage. This is not to discount the risks involved in such investments, but they are certainly better equipped to cope with these risks if they incur losses.

¹⁰¹ Arguing this with certainty would require a detailed study of costs and returns over different kinds of crops for individual farmers over multiple years, an exercise beyond the reach of this research.

7.4 Cauliflower

Cauliflower is the second most widely produced vegetable in the fieldwork area after potato and farmers who grow it consider it to be a more ‘legitimate’ vegetable than potato due to its faster perishability. The section is structured as the previous ones were: a discussion on aspects of production followed by those of the market.

7.4.1 Cauliflower Production

Cauliflower is traditionally a winter crop, but in some Khanna villages it has been grown year-round for the past 15-20 years. Moreover, the scale of production has increased considerably during this time. The change has been made possible due to seed development and changes in the seed market (see below).

The process of cauliflower production starts with the preparation, done mechanically by a tractor, plough (*hal*) and land-leveller (*suhaga*). Everything else is done manually, i.e. through labour. Seeds are sown in a ‘nursery’ field; 30 days later the seedlings (*paneeri*) are transplanted to other fields, a process called *labayi*. Until the crop ripens, some rounds of *godayi* or weeding and loosening the soil around individual plants has to be done. Harvest involves picking the crop and loading it on trolleys.

After transplantation, cauliflowers can either be roughly 90 or 70 day crops, including a couple of weeks of harvest, since all curds do not mature simultaneously. If a farmer is using only 90-day crops, he can reliably take only two cauliflower crops from the same land per year since there would not be enough time to take a third one of cauliflower. The farmers then grow a different third crop for example, paddy, maize or a different vegetable. With a 70-day crop, on the other hand, farmers can grow three crops on the same piece of land in one agricultural year. These three crops are transplanted in mid-June, mid-November and mid-February; in local parlance, the first of these is referred to as the ‘*haadu*’ (summer) crop and the latter two as ‘*siyaalu*’ (winter) crops.¹⁰² This is popular with farmers in Uchakhurd. But equally, farmers who grow cauliflower may choose any combination of short and/or long duration cauliflower and/or one or more other crop on different plots of their operational holding. Mostly, however, the crop cycles are of the kind described

¹⁰² In colloquial terms, there are actually six seasons for growing cauliflowers: ‘*haadu*’ (harvested in roughly August-September), ‘*katki*’ (October-November), ‘*magri*’ (December-January), ‘*poos*’ (February-March), ‘*cheeni*’ (March-April) and ‘*kala patta*’ (May-June).

in Table 6.2. This implies that these villages supply cauliflower to the market throughout the entire agricultural year.

All operations other than the land preparation are done with the help of hired labour. In other words, cauliflower, like other vegetables, is extremely labour-intensive. Consequently, cauliflower farmers employ more naukars than either paddy/wheat or even potato-growing farmers (Table 7.9). As one farmer said, ‘One acre of vegetables is equal to five acres of wheat/paddy, with respect to labour, expenses, income, everything. One naukars can take care of ten acres of wheat and paddy but in vegetables, one acre of cauliflower requires one naukars’.

Table 7.9: Number of naukars employed by farmers based on different crop cycles (b)

Crop Cycle	No. of Naukars Employed				Total Households
	None	1	2	3 or more	
Paddy and wheat	23	5	1	1	30
Potato included	10	14	3	1	28
Cauliflower	5	4	5	6	20
Potato and cauliflower	1	1	2	2	6
Total	39	24	11	10	84
n					93

Source: Own household survey 2014-15

One farmer, Sunny, who grows 50 acres of cauliflower almost year round, routinely employs 15 naukars. A few others who cultivate it on similar scales have other strategies. They employ around 5 naukars on an annual basis, and then five more for harvesting. It is not unusual for large farmers to employ one or two extra naukars on a seasonal basis during the harvest of cauliflowers (and potatoes).

So intense is the labour requirement throughout the production process that some large farmers engage in *adh-batai* with the labour gangs. Adh-batai is a system whereby the farmer contributes the land, the tractor and machines for land preparation and irrigation costs (if diesel pumps are needed). The cost of seeds and crop chemicals is shared equally (*sanjha*) between farmers and labour. The latter are responsible for all the labouring operations and the sale of crop.¹⁰³ The income from

¹⁰³ It is not known if the farmer plays any role in the sale of the crop so as to secure a good price.

the sale is divided equally between farmer and labour gang. Usually these gangs are composed of Biharis, and only occasionally of local SC labour.

Only very large farmers opt for this on a part of their land. Sunny has a total operational holding of 50 acres on which he cultivates 30 acres of cauliflower under his supervision and 20 acres under adh-batai. Another farmer with an operational holding of 32 acres cultivates 24 acres under his supervision and 8 acres under adh-batai. These farmers argue that the income for them is the same with or without adh-batai but they opt for it since it is not possible for them to manage the labour involved in cultivation of cauliflower on such a large scale. In the words of one such farmer, '*Aap karaange tab toh saanu beeh sanjhi rakhne payenge; phir do sau rotiyaan keemein bana lengi timiyaan*' (If we cultivate on our own, we will have to keep 20 sanjhis; then how will the women make 200 rotis [traditional wheat bread] for them). Some such farmers employ local SC women only to make rotis for the naukars. The amount of land under adh-batai also depends on the number of male members in a family who can contribute to farming.

Seeds

The Rajdeb and Chandradeb varieties from Hajipur in Bihar dominated the market for cauliflower seeds in the area for around thirty years until the turn of the century. Seeds also came from Solan in Himachal Pradesh. While they may have been the best option at the time, these seeds were of inferior quality; their germination rate was low and they could not withstand any amount of rain. The liberalisation of the seed market allowed corporations to capture this market with better quality products, especially hybrid seeds. Two companies, one domestic (Doctor) and one TNC (Syngenta), dominate this market now.

Hybrid seeds are used mainly for crops grown in the winter months. Seeds from both companies are used, but the TNC brands are preferred. The domestic company claims that their seeds are not inferior and the preference is purely due to branding. Farmers, on the other hand, state quite clearly that there is a difference in quality. In the words of Amandeep Singh, 'The thing with the *baaharli* [foreign/TNC] seeds is that if they say that the crop comes after 20 days, then it comes after 20 days, no matter what. *Desi* [local] seeds will not germinate if it gets too cold; they only grow well in the summer'.

Indeed, in the summer, the farmers do not use hybrid seeds but open pollination (OP) varieties mostly from Doctor and other domestic companies. Many TNCs tried to promote hybrids for the summer months but they failed. A manager at Doctor explained:

Naturally, the way God or nature has made it, cauliflower is actually supposed to be grown in autumn/winter. When OP is sown in April/May, sometimes as much as 500g of seeds per acre is required. It is so hot that many seeds die. In fact, due to the *loo* [hot dry winds], some farmers sow as much as 1kg of seeds per acre. For one acre of fully grown crop [after transplanting], 22,000 seedlings are required. Whereas 200-250gm of seeds are used to grow 22,000 seedlings in other seasons, at this time of the year, 1kg is being used for the same number. The seedlings can die during sowing, during transplanting and even soon after transplanting. If this is done with OP, the cost [which may translate into a loss to the farmer] is Rs 1,600 per acre, but if hybrids are used at this time, the risk increases to Rs 48,000. In other words, the increase in risk is about 40 times. This is why hybrids in *haadu* [summer] were not successful. So, what I had told you earlier about farmers preferring hybrids does not apply in this season. In this season, even progressive farmers usually prefer OP.

This reveals the differences in the agronomical suitability of different kinds of seeds, and the calculated choices made by farmers in using them. It also indicates the significantly higher costs of hybrid seeds. This and other aspects of costs of production are discussed next.

Costs/Profits

TNC hybrid seeds cost as much as Rs 40,000-48,000 per kg, although there are also hybrids in the range of Rs 12,000-20,000 per kg. OP seeds usually range from Rs 1,200-4,000 per kg. All farmers buy new seeds each season. Despite the high costs, large farmers prefer to use hybrids in the winter seasons since they are reliable and fetch a good price. The manager quoted above continued:

200-250 g of seeds is required per acre. The hybrid seeds may cost more but other costs [e.g. fertilizer, irrigation, etc.] are the same. So if you calculate – say OP worth Rs 1,600 is used – the seed cost for one acre will be Rs 400; at Rs 10 per kg [with an average yield of 100kg per acre], the income from one acre will be Rs 100,000. If hybrid seed costs Rs 16,000, the seed cost for one acre will be Rs 4,000. At Rs 10 per kg [average yield 130kg per acre], the income will be Rs 130,000. So the farmer might spend Rs 3,600 more per acre but [after deducting the seed cost] he earns Rs 26,400 more.

Small farmers may prefer OP but in any case, they rarely grow cauliflower because of the prohibitive costs and labour requirements (see Table 7.10).

Table 7.10: Costs of production of cauliflower per acre

Item	Hybrid/Winter (Rs)	OP/Summer (Rs)
Land preparation (<i>bahai</i>)	3000	3000
Seed	16000 (250g)	4000 (1kg)
Labour: sowing (<i>bijayi</i>)	2000	2000
Labour : transplanting seedlings (<i>labayi</i>)	2000	2000
Fertilizers and crop chemicals*	7000	11000
Labour: weeding and soil loosening (<i>godayi</i>)*	4000	12000
Labour: harvesting** (<i>katayi</i>)	2000	2000
Irrigation	3000	3000
Total production cost	39,000	39,000

Source: Own fieldwork 2014-15

*Chemicals include pesticides and weedicides. The cost of chemicals and *godayi* is higher for the summer crop since cauliflower is not naturally a summer crop, is more susceptible to diseases at the time, and needs more care.

**Farmers gave rough figures for the labour used in harvesting one acre. It is higher in summer because sometimes the timing coincides with the wheat harvest, causing a labour shortage. It is also difficult to give an exact figure since this is done with the help of *naukars* and casual workers (paid Rs 200-250 per day) over a period of many days and several acres.

Even though a winter crop of cauliflower needs less care than a summer crop, the costs are roughly the same because of the more expensive hybrid seeds used in the former. Nevertheless, at almost Rs 40,000 per acre, the cost of cultivating cauliflower is much higher than wheat or paddy. Moreover, the State does not support the crop in any way. Prices can therefore fluctuate considerably during a single day, not to mention over an entire season, and more so than potatoes. Here also, farmers like to use the phrase '*sattebaazi*' or gambling to indicate market volatility. Table 7.11 shows the yield levels and price range for the summer and winter crops.

Due to the intense variation in prices, it was not possible within the limits of this research to estimate profit figures. Many farmers were also reluctant or unable to give an estimate of profit per acre per season. However, many stated that they earn an average of Rs 100,000 per acre per season. This, they argued, could be true for

both the summer and the winter crop because the former has relatively lower yields but higher prices while the latter has higher yields but lower prices.

Table 7.11: Yields and price range of winter and summer crops of cauliflower

	Winter	Summer
Yields (quintals per acre)	150	100
Price range (Rs per kg)	2-15	15-30

Source: Own fieldwork 2014-15

Like potato, the high costs of production combined with market volatility and lack of State support means that this is not a crop commonly grown by small farmers. But unlike potatoes, it is possible for small farmers to profit from it if they also contribute to the labour in these operations. Table 7.12 shows the class positions of farmers who cultivate cauliflower. The three petty producers who cultivate this crop employ labour gangs for the major operations, such as transplanting, weeding and picking, but usually spray the chemicals and irrigate the fields themselves. One of these farmers, in fact, owns only half an acre and is cultivating another farmer's two acres for six months under the adh-batai arrangement described above. Moreover, since harvesting is spread out over a period of time, sales are also spread out, creating the possibility of getting higher prices for at least a part of the crop.

Table 7.12: Cauliflower-growing farmers by class

Class	Number
Petty Producer	3
Small Capitalist	4
Large Capitalist	22
Total	29
n	93

Source: Own household survey 2014-15

For large farmers, on the contrary, the crop is a serious money-spinner. Due to the extreme variation in prices and the nature of the study, it was difficult to calculate profits for each harvest, but by their own admission they ranged between Rs 70,000 to Rs 150,000 per acre. At an average of Rs 100,000 per acre per harvest then, a large farmer growing only two crops of cauliflower over 10 acres would earn Rs 2,000,000 in a year. In other words, for large farmers cultivating two to three crops

of cauliflower over several acres, this profit would be very large. As a result, even in seasons when they make some losses, they are well-cushioned to invest on the same scale the next season. Among other things, their profits are reflected in the houses some of these farmers have built for themselves – large and imposing, complete with the most modern furnishings. Popular in Punjabi cuisine, cauliflower’s importance for accumulation was suggested when, in a lighter vein, the young son of Karnail Singh, a large capitalist cauliflower-growing farmer, commented, ‘You know, Madamji, how long it has been since I ate *gobhi* [cauliflower]? I cannot even remember! The prices are so high that we prefer to sell everything we grow, not cook it at home, and do something else with the money’.

7.4.2 *Cauliflower Markets*

There are two main channels through which farmers sell the cauliflower they grow.

Via the Arhtia-Trader

In Uchakhurd, cauliflower production started fifty years ago with a single farmer, after which others followed suit. Referencing the long-term and large-scale production of cauliflower there, a farmer from Rattankalan said, ‘Even forty years ago, all of Uchakhurd were growing vegetables, especially cauliflower. Their land has become so poisonous [because of the alleged build-up of chemicals used on the crops]. Actually all their food is so poisonous. I think if someone tastes their soil, they will die.’

Some farmers in Uchakhurd argue that their cauliflower production is so high because agronomy of the village and neighbouring ones is particularly well-suited to its production. One farmer said that it is ‘God’s gift’ to them, similar to the Doaba potato kings’ sentiment. Farmers in the other villages, however, argue that this is not true at all, and the crop can grow well anywhere. Another argument for the spread of the crop has to do with Uchakhurd’s proximity to Khanna: cauliflower has to be sold on a daily basis at the mandi and Uchakhurd is only 3km from the centre of town. This may well have contributed to the expansion of cauliflower cultivation in this village, but the phenomenal increase in the volume of production over the past two decades was due to the introduction of improved seeds.

Before this increase, farmers would take their crop to an arhtia in the Khanna sabzi mandi where it would be auctioned. To reiterate, the arhtias in the sabzi mandi do

not extend any advances to the farmers. With the dramatic increase in the volume of cauliflower produced in the village, as with table potatoes, the traders-cum-arhtias from mandis across the state, including Ludhiana, Jalandhar and Chandigarh, as well as smaller places like Jagraon, Kapurthala and Ropar, contact the farmers at harvest time and vice versa, and the farmer sells where he gets the best price: in the words of one farmer, ‘Our village has become a mandi’. This works well for farmers since they receive higher prices and is also more convenient, especially given the logistics involved in managing the sheer volume of crop produced. They may also sell at the Khanna sabzi mandi but that is rare.

Direct Sales by Farmers

A different marketing channel is used by farmers who grow cauliflower in Rattankalan. These farmers sell their produce in the Ludhiana sabzi mandi. Located on NH1 on the way to Jalandhar, Ludhiana sabzi mandi is enormous, and has a large area specifically designated for direct sales by farmers, the Jat mandi. Khanna sabzi mandi also has an area designated for farmers to sell their produce but, since it caters to a much smaller market, the prices are not as high as in Ludhiana. In Ludhiana, farmers sell to bulk purchasers who buy 4-5 quintals each daily and supply smaller middlemen, colloquially referred to as ‘retailers’, who buy around 20-30kg each. These retailers then usually sell to even smaller vendors (*rediwallahs*) who have a daily maximum capacity of 1-1.5kg; they sell directly to the customers. Figure 7.4.1 shows this network.

Farmers → Bulk Purchasers → Retailers → Small Vendors → Consumers

Figure 7.3: Direct sale of vegetables by farmers at Ludhiana sabzi mandi

For farmers who sell their crop in this way, it is hard work. They have to travel over 40km with their produce to the mandi in Ludhiana, arriving by 4am. There they have to haggle with individual bulk purchasers before returning home at noon or later, after which they catch up with their sleep. And during the harvest period this is repeated every 2-3 days. Those who depend on this channel usually plan their production so that they have cauliflower harvests over the whole year. Karnail Singh, for example, has an operational holding of 20 acres and cultivates eight harvests of roughly two acres each on different plots of his land each year.

These farmers believe that the effort is worthwhile and that this way they get better prices compared to selling it through the traders. Karnail Singh said:

We take the cauliflower without packing and with the leaves to the Jat mandi in Ludhiana; we have been doing this for the past 2-3 years. If we sell through traders, then there are losses. Traders do not give the correct price and the consumer also gets a higher price and lower quality. We go to Ludhiana and not Khanna because Khanna mandi is too small and it cannot absorb as much quantity so the retail price declines. The mandi in Ludhiana is like an international market; the prices get updated on the computer and there are five different markets. My brother who takes the cauliflower to the mandi deals with 200 people in one day.

Another farmer who has an operational holding of 20 acres and cultivates seasonal vegetables including tomatoes and gourds, but only occasionally cauliflower, also sells his produce in the Ludhiana mandi. According to him:

This way we [the farmers and buyers] also save on 9% taxes [5% commission of arhtias and 4% mandi fees]. We also develop one-to-one relations with the buyers. We do good grading and charge more money for good quality produce. In the auction, the arhtia auctions off a heap and then the quality is not his responsibility. As a result, even these buyers do not mind paying us more. In Ludhiana mandi, we get prices that are 15-20% higher than what we would get in Khanna mandi or direct from the farm. But then again, only those who have vehicle loads, i.e. bulk supply, can go that far to sell because otherwise, the price will not cover the costs.

Pointing to the highly competitive nature of this work, he added:

There is great competition among vegetable farmers. It is a very personalized business. If I have good results from, say, a pesticide, then I will never tell that to a fellow vegetable farmer, and vice-versa. I learnt everything in bits and pieces from here and there, including employees of agro-chemical companies. But mainly I learnt from experience. The reason for so much competition is that the good quality stuff is sold at higher prices and also faster. At any point in the mandi, for example, brinjal [aubergine] is sold from Rs 5 per kg to Rs 12 per kg.

The above quote points clearly to the benefits of using this marketing channel. However, it also suggests that is not suited to small scale production. Indeed, small farmers do not consider this to be an option. They either sell their produce through the arhtia-trader or in the area designated for direct sales by farmers in the Khanna sabzi mandi. But in the latter, the arhtias unlawfully take commission from these

farmers. Another option for small farmers is the Apni Mandi (see Chapter 3). Apni Mandis are small, open retail markets where both farmers and non-farmer vendors can sell fruit and vegetables to consumers. In Khanna, the Apni Mandi has been in place since 1988 and takes place at different places on different days of the week.

On the profitability and viability of Ludhiana mandi as an option for large farmers, however, a farmer in Uchakhurd said:

Those farmers do more work but earn less. They grow only two acres, say even four acres, of cauliflower at a time, so it is possible to do that [sell in Ludhiana]. We grow much more so we cannot sell on our own; we have to spend time taking care of the crop as well. Also, we earn more for a smaller family; they earn less than us in a bigger family.

The above shows that, as in the case of potatoes, large farmers are making clear choices in accumulating through cauliflower. At the same time, these choices are also shaped by the accepted norm (*rivaaz*) of marketing in different villages. Uchakhurd and Rattankalan are less than 10km from each other. Cauliflower is a much older crop in the former, cultivated on a much larger scale, and almost all large capitalists cultivate it. Therefore, farmers in this village have extensive networks with traders. In Rattankalan, on the other hand, cauliflower farming only started twenty years ago and is relatively less widespread. Moreover, rather than growing cauliflower over large areas over one or more season, Rattankalan farmers grow it over smaller areas throughout the year. Therefore, they do not have comparable networks of traders. Ludhiana mandi, therefore, presented them with a profitable alternative.

New Directions: Contract Farming

A couple of large cauliflower farmers in Uchakhurd have diversified into other high-value vegetables through contract farming of seeds. One of them has been doing this for Doctor for fourteen years, and has cultivated seeds for cauliflower, carrots, muskmelon and peas. Contracts are written. During fieldwork, he was cultivating 50 acres of pea seeds for the company. He said, 'They fix the rate of the seeds in advance. They take everything and what is rejected is given back to the farmer. Peas are beneficial for us as they leave nitrogen in the soil and that is good for cauliflower'. He also said that the company does contract farming for seeds in many other states, yet is still not able to meet the demand for its products. He added, 'In

general, companies make a lot of profit in seeds. They give us Rs 50 per kg for peas but they sell it at Rs 150 per kg and all that they do is branding and packing.’ Even though the company takes much higher profits than the farmers, this farmer finds it to be profitable enough to continue. Sunny (mentioned earlier) has been doing contract farming with the same company for radish seeds for 5-6 years. In 2014-15, he was growing around 10 acres under this arrangement.

It is probably not a coincidence that two of the largest cauliflower-growing farmers in the villages surveyed have taken up contract farming. Admittedly, two is a very small number to draw any broad conclusions about contract farming in seeds, or reflect on how it compares with contract farming for seed potatoes; nevertheless, it shows a new avenue through which large cauliflower-growing farmers in the area are expanding their scope of work.

7.4.3 Conclusion

Amandeep Singh once said, ‘There are savings in vegetables but there is also risk. Also, more work and more *samajh* [understanding] is required. Those growing wheat and paddy only have to work ten days in each season; after that they do not have a lot of work’. But farmers do not only require a *samajh* of production and marketing to be successful in this complex vegetable economy; success also requires capital and risk-taking ability. This is also indicative of the kind of effort and resources required on the part of small *and* large farmers to move beyond the wheat-paddy cycle, i.e. for crop diversification, which is considered urgent for Punjab’s economy and ecology.

While this kind of cultivation may not be particularly suited to small farmers, large capitalists have been able to profit immensely from it. In this, they have benefitted from and readily adapted to the new cauliflower seeds developed by domestic and multinational corporates in the wake of liberalisation. While the prices of some of these are extremely high, so are the returns to their investment. Cauliflower production also requires a lot of labour and different kinds of labour arrangements suited to this economy have evolved in these areas. The fieldwork area presents two main channels through which the crop may be sold. It is on the back of the large numbers of labourers these farmers command and their adept navigation of the markets that these large capitalist farmers have created a different pattern of

accumulation. Some of them have started expanding the scope of this pattern by diversifying into other vegetables and contract farming for vegetable seeds.

7.5 Conclusion to Chapter 7

Some broad conclusions can be drawn from the discussion in the foregoing sections on the production and marketing of different crops. Firstly, all crop production is capital-intensive, although to varying extents. The vegetable crops (potato and cauliflower) are more expensive than the food grains (paddy and wheat). This could be due to the costs of seeds, irrigation, inputs and/or need for machines for some operations. In each of these crops, some operations in particular also involve substantial expenses on labour, e.g. paddy transplanting, wheat harvesting (although not commonly done manually), potato harvesting, and almost every aspect of cauliflower cultivation. Importantly, different kinds of inputs are also time-sensitive. These factors taken together mean that there is an in-built bias in the **production process** against farmers who cannot muster adequate resources, i.e. petty producers. Capitalist farmers, on the other hand, and especially the larger among them, are able to reap large profits from these crops and may even increase the investment they make in the production process over a period of time.

Secondly, the **materiality of the crop** matters not only to the production process but also to the structure of the markets. For example, since paddy needs to be processed – cleaned, shelled and graded – for sale as rice, mills gain importance. Wheat, on the other hand, can be stored, sold and consumed without major processing requirements. While flour mills are important players in the wheat market, they are not part of the government procurement process as rice mills are for paddy. Similarly, that potato can be stored (in the case of seed potatoes, they *need* to be stored) implies not only that cold stores are important, but that the crop itself can be sold at different times of the year at different rates and thus varying rates of profit. The perishability of cauliflower, on the other hand, means that its market is geared towards daily sales and consumption by consumers.

Thirdly, agricultural markets are constituted by **different kinds of traders**, or actors and entities embodying some kind of merchant's capital. This is obviously the case between different crop markets, but also within the market for the same crop. Markets for paddy have arhtias, pucca arhtias, rice mills, exporters and brokers. In

wheat, there are arhtias, flour mills and brokers. Potato has sabzi mandi arhtias, arhtias-cum-traders, farmers who also work as traders, and agribusiness companies. Cauliflower markets are home to sabzi mandi arhtias, arhtias-cum-traders, bulk purchasers and petty vendors. Moreover, the interests of different kinds of traders are aligned with different kinds of processes. For instance, arhtias in the grain mandi are dependent on state procurement, while basmati rice exporters benefit from lack of State regulation. Similarly, agribusinesses dealing in potatoes have benefitted from a liberalised policy regime. These traders maintain their local dominance by variously using informal social networks, collective organising and leveraging State policies.

Fourthly, the **relations of different farmers with different kinds of traders** vary. All farmers, for example, are dependent on the arhtias in the grain mandi by virtue of their licensed role in procurement but also because they provide credit. Here, the dependence of small farmers is greater than that of large ones. Next, there are hardly any farmers with small operational holdings that cultivate potatoes. Production costs are a major reason but it is also true that contract farming models and other kinds of production followed by agribusinesses actively exclude such farmers. It is the larger capitalists then that are better integrated with such capital. Similarly, arhtias-cum-traders only purchase cauliflower directly from the farms when large-scale production is involved. This locates farmers cultivating cauliflower over large and small areas quite differently in the vegetable market, even if both kinds are capitalist.

Finally, **State** procurement of paddy and wheat continues to be crucial to the profits made by farmers through agriculture in Punjab. These profits may not be adequate for small farmers to sustain themselves but they are certainly remunerative on a large scale. Especially for farmers cultivating other crops where there is no State support like potato, cauliflower or even others like sunflower or maize, the prices of which can be fairly volatile, the income from paddy and wheat works as an assured buffer. Finally, State regulations for these commodity markets are distorted in many ways (summarized in Table 7.13).

Table 7.13: Distortions to regulative law in different commodity markets

Commodity	Rule	Distortion
Paddy	Parmal paddy to be purchased by state agencies from farmers	Decisions on purchases taken by mill
	Moisture levels in parmal paddy should not be more than 17%	Mills accept parmal paddy with slightly higher moisture
	Attaching of arhtias with agencies (and thus to rice mills) to be done row-wise	Often done on the basis of the existing informal relations between arhtias and mills
	Timely payments to be made by the state agencies to the arhtias and farmers	Delayed ostensibly due to conflict in centre-state relations
	Rice mills to deliver 67% rice of specified quality from the paddy procured	Rice mills using paddy from other sources to meet quality specifications
	No State procurement of basmati paddy or guaranteed MSP	Basmati procured by state agencies in 2015-16 at MSP
Wheat	State procurement based on quality standards approved by the centre	Delay in approving quality standards leads to distress sales to private mills
	Sale of wheat by auction	Sales to private flour mills done on the basis of informal relations between arhtias and mill owners
Potato/ cauliflower	Licensed arhtias to facilitate sale of potatoes in mandis	Unlicensed brokers or licensed arhtias working as brokers to facilitate sales

Source: Own fieldwork 2014-15

Chapter 8. Equations of Land

In this chapter, landholdings and land markets are at the centre of the analysis. I show how the dynamics of the land market impacts farmers' agricultural decisions and landowners' use of land as an asset, thus adding further layers to our understanding of agrarian accumulation in Punjab's countryside.

8.1 Landholdings

Tables 8.1 and 8.2 show the findings of the household survey on owned and operated landholding. The former shows that over 65% of all respondents own less than 10 acres of land. Farmers said that fragmentation of landholdings over time was a major cause of this. The survey recorded the amount of land owned by every respondent's grandfather, and the distribution of the inherited land thereby. In most cases, there has been considerable fragmentation of landholdings due to distribution of land between several sons over different generations. In some cases, the respondent's father and/or uncles had succeeded in purchasing some land, which increased the amount available to be distributed amongst the next generation. Nevertheless, small landholdings form the largest proportion of all the categories.

Table 8.1: Total land owned by farmers

Land (acres)	No. of Farmers	% of Farmers
0	1	1.1
0.1 – 4.9	35	37.6
5 – 9.9	27	29.0
10 or more	30	32.3
Total	93	100

Table 8.2: Total operational holding categories

Land (acres)	No. of Farmers	% of Farmers
0	5	5.4
0.1 – 4.9	16	17.2
5 – 9.9	13	14.0
10 or more	59	63.4
Total	93	100

Source for tables: Own household survey 2014-15

On the other hand, only about 30% of the respondents have an operational holding of less than 10 acres. This is partly due to the biased composition of the sample for the survey, but it clearly establishes the importance of land-leasing in agriculture in the fieldwork area. It shows that around half the ‘large capitalist farmers’ in this sample only qualify as such because of the land they are leasing-in. It also shows that some farmers are leasing-out their entire holding.

The landholdings may be owned and operated quite differently by different households. Land could be owned and operated by an individual farmer. It may also be held in the name of the respondent’s father, if still alive, and operated effectively by one or more sons.¹⁰⁴ In some cases, brothers conducted their operations jointly, and in such cases also lived together in a joint family. In other cases, the brothers may operate their share of the land separately even though the land is legally owned jointly or *sanjha*, making them effectively different operational holdings (such cases were recorded in the data as different).¹⁰⁵ When land is *sanjha* between two farmers, it means that legally they are co-owners of 100% of the property. However, in practice, each person will have actual control over 50% of the land. This means, in the words of a farmer, ‘If I sell my share to a third person, then the remaining 50% will still have my name but I will have no control over it’. Land ownership and control is, therefore, governed as much by customary rules within the community as they are by land laws.

8.2 The Land-Lease Market

The land-lease market around Khanna is very dynamic. The most common form of lease arrangement, usually called *theka* but sometimes *zabti* or *mamla*, is when a landowner leases-out his land to another farmer for 12 months, from 1st June of one year to 31st May of the next. The agreement for this deal is made many months in advance in the previous agricultural year. Which farmers are willing to lease-out land and which are willing to lease-in is learnt through word of mouth within the village and sometimes also in other villages. The deals are usually made through an oral agreement between the two sides. Sometimes this involves a farmer known to both sides who facilitates the deal, a *dalal*, who is paid a commission of Rs 1000;

¹⁰⁴ There was only one case in the survey where the land was in the name of the respondent whilst the father was still alive. This is considered exceptional.

¹⁰⁵ Occasionally, such brothers may share the tube well or some implements between them.

sometimes the deals are struck directly between the two sides. Occasionally, there may be a rough written agreement which is done in front of the middleman or an official of the Block administration. When the deal is struck, the lessee has to give a *shahi* or symbolic amount, e.g. Rs 1000 or Rs 5000, to seal the deal (later deducted from the lease cost). Half of the lease rent has to be paid at the beginning of the lease period (by 1st June) and the other half after six months (by 1st December).

In my survey sample, there was only one case where land was leased-out for six months. This was a small farmer owning 2 acres, the only landowner belonging to the *Tarkhan* (carpenter) caste that I met, who leased-out his land during the summer season. With his meagre resources, it made economic sense for him to grow only wheat for self-consumption during winter. Another kind of lease is the *adh-batai* discussed in Section 7.4 on cauliflower. This is also commonly done in Paunpura for okra which is a five-month crop cultivated usually between February-March and July-August.

It should be noted that leasing of agricultural land is not illegal in Punjab but ‘the tenant... acquires the right to purchase the leased land from the owner after a specified period of creation of tenancy’ (Niti Aayog 2016, 6): this is why the lease agreements are not made through the legal route. In further evidence of the importance of customary rules in access to land, these ‘illegal’ agreements are the accepted norm and upheld by all due to the values of honour and reciprocity within the village and within known personal networks, an issue revisited below.

The rates for leasing-in land have been increasing continuously and stood at Rs 40,000-50,000 per acre p.a. at the time of fieldwork.¹⁰⁶ Different farmers used different reference points to emphasise how high lease rates are now. One farmer said it was Rs 20 per acre before the Green Revolution, another that it was Rs 700 in 1984 and yet another that it was Rs 12,500 in 2000. To some extent, this increase could be explained as a function of inflation. However, it is closely linked to the increase in major crop prices. This is a discursive argument made generally by farmers and is difficult to establish scientifically. But the evidence below suggests

¹⁰⁶ The rates are lower when there is no tube well on the farm, and could be as low as Rs 30,000 per acre p.a.

that it is reasonable to argue for a rough correlation between people's claims about the prices of lead crops and the land lease and sale values.

The Congress-led central government, which was in power between 2004 and 2014, increased the MSP for wheat and paddy considerably: wheat increased from Rs 640 per quintal in 2004-05 to Rs 1,400 in 2014-15, and paddy from Rs 590 to Rs 1345 per quintal (Directorate of Economics and Statistics 2004a, 2004b, 2014). Corrected for inflation, the 2014-15 prices for wheat and paddy are actually much lower at Rs 772.6 and Rs 742.3 per quintal, respectively.¹⁰⁷ Nevertheless, they reflect a real increase of approximately 26% and 21%, respectively.

As mentioned earlier, recent years also witnessed a price boom for basmati. Potatoes are also profitable in most years and agribusinesses have expanded the market in new ways.

Many farmers argue for a close correspondence between lease rates and crop prices. One said, 'If two crops have done well, then those leasing land out will increase the land-lease rate'. Another told me, 'Where there is potato or three crops are commonly grown, there the lease rates are higher. Where less potato is cultivated, the lease rates are lower, between Rs 30,000 and Rs 50,000'. Yet another said,

The emergence of commercial crops is the main reason. Between Khanna and Doraha, there is a belt of eight to ten villages where potato is grown and where farmers have earned good money in potato in the past two to three years. There the lease rates increased and as a result, there was a ripple effect and the lease rates for other villages also increased.

It is clear that the cultivation of potato and its prices is considered an important factor causing the increase in lease rates. The assumption in this causality is that land is being leased-in to cultivate potatoes. This is not an invalid assumption. In fact, Section 7.3 showed that potato cultivation is beneficial when done on a large scale. Given that the owned landholdings of many farmers are small, it is only logical that many of the 'large' farmers would be leasing-in land. The data from the household survey reinforces this. Table 8.3 shows that an overwhelming majority of potato-growing farmers lease-in some land.

¹⁰⁷ The Wholesale Price Index (http://eaindustry.nic.in/download_data_0405.asp) for 2014-15 has been used here as it is the producers' price index.

Table 8.3: Land leased-in by potato-growing farmers

Amount of Land Leased-in (acres)	No. of Farmers
0	7
0.1-4.9	5
5-9.9	7
>10	15
Total	34

Source: Own household survey 2014-15

Here, however, a distinction needs to be noted between different kinds of lessees, perhaps best described as more or less successful potato farmers. For example, Kulwinder Singh cultivates potatoes over 60 acres but owns only 5 acres. He has been leasing around 50 acres annually for at least the past decade. On the other hand, there is a farmer in the same village who grew potatoes over 2 acres in 2014-15 and has been cultivating the crop for around seven years. He owns only 2.25 acres and leased-in 3 acres. Since this study could not capture the work histories of the farmers included in the survey, it is not possible to give a clear explanation for the difference between such farmers today, even though both have been cultivating the crop for many years now. Nevertheless, such differences in the scale of cultivation and the capacity to lease-in are important to bear in mind.

The causality between potato cultivation and leasing-in of land made above can also perhaps be reversed. It may be said that in the case of some farmers, especially the kind of smaller farmer described in the above paragraph, potatoes are cultivated *because* there is a need to lease-in land.¹⁰⁸ The previous chapters on crops established that small-scale farming can only provide small profits and limited scope for expansion: this is one of the reasons that leasing-in land is so popular. At the same time, the lease rates are so high that producing only two crops (excluding cauliflower) does not make economic sense. The returns on paddy and wheat are declining, and a third major crop is required to cover these costs. This third crop is potato. Harman Singh, who owns two acres and leased-in seven more in 2014-15 said, ‘On lease, sometimes we are able to save, at other times, we make a loss. That

¹⁰⁸ One farmer argued that sometimes farmers lease-in land in order to cover the losses they might have made in the previous year.

is why we take three crops from the land. If the price of potato increases, only then can we save a lot’.

This can be better illustrated using some profit estimates from the previous chapters. The profit per acre from wheat and paddy was calculated as roughly Rs 30,000 and Rs 15,000 respectively, i.e. Rs 45,000 in total. Given that the average lease rate is Rs 45,000, paddy and wheat cultivation on leased land would leave a farmer with no profit. It is clear then why cultivation of a crop like potato is closely tied to the dynamics of land-lease.

Some argue that land-leasing, especially for small farmers, is actually counter-productive and is bound to lead to indebtedness. The way the deal is done is pertinent to this. I mentioned earlier that half of the total lease amount has to be paid to the lessor at the beginning of the contract period, i.e. by 1st June; for nearly all small farmers the amount is so large that they have to get a loan from the arhtia. For example, if a farmer leases-in five acres at an average of Rs 45,000 per acre, he will have to deposit Rs 112,500 at the beginning of the agricultural year. A farmer may or may not have this lump sum amount available with them to make the payment, forcing them to take a loan. Jaspal Singh, the farmer-arhtia mentioned in Section 7.1, thinks of lease rates as one of the banes of farming. Referring to a farmer sitting in his shop at the time he said,

He has eight acres of his own and his son leases-in eight acres. He has implements worth Rs 1,000,000; they borrow the lease amount from us and he has to pay interest on it. They should do *apni kheti* [farming on own land] and then they will save. If he leases-in land, he will bring two trolleys instead of one trolley. He should do some dairy work instead. If he farms eight acres, there will be no need for a naukhar as well. If he farms only eight acres, then they can do time-pass comfortably.

Even though leasing-in land is considered harmful to farmers, the high demand for the same implies that there are profits to be made through it. The real issue then is the impact of high land-lease rates on profits more generally. The average lease rates are equivalent to the cost of cultivating an acre of potato or cauliflower, one that is excessive for many.

Thus, to understand accumulation by different farmers it is important to account for the size of operational holding as well as the proportion of leased-in land. In fact, a

major grievance of farmer leaders is that the CACP grossly underestimates the actual lease rates when calculating the cost of cultivation to determine the MSP.¹⁰⁹

8.2.1 *The Lessors and the Lessees*

For a better sociological understanding of the lease market, it is important to identify those who are engaged in leasing-in and leasing-out land. It should be noted at the outset that those who are leasing-out today may not be next year and vice versa for the lessees. Similarly, the amount of land leased-in by a farmer may vary considerably from one year to another. This could be due to deals falling through or financial considerations, a point I return to below.

The phenomenon of reverse tenancy mentioned in Chapter 4 is confirmed by the data. Farmers with small landholdings often choose to lease-out their land as they are unable to afford the high investments and risks involved in farming profitably. Several farmers in the sample lease small landholdings, ranging from two to five acres, from such landowners. The survey sample also reported a couple of small landowners who lease-out their land for this reason. Moreover, the survey shows that many farmers have leased-in large landholdings, anywhere between 10 to 25 acres, from individual landowners. Many factors can lead large landowners to lease-out their holdings, despite the profits to be made from such land. Gurjeet Singh, the young son of a large capitalist farmer, in one of the survey villages explained this:

Land is leased-out by NRIs [Non Resident Indians]. There are NRIs in Paunpura who have leased-out 35-40 acres; there are in general many NRIs from Paunpura. Then, if someone has a good job, they do not have the time so they lease-out their land. Then if someone does not have sons, the farmer thinks 'I will lease-out land, get a neat income of Rs 500,000 annually, manage within that and marry off my daughters properly'. Then, if there is no manpower to do farming, then also people have no choice but to lease-out the land. See, my father manages farming on 20 acres now. Once he gets a bit older and cannot do so much work, then it is not that I will start farming. I do not know any farming. I will do some other business. We will also lease it out eventually. Of course, there are also people who lease-out land simply because they want to sit at home.

A slightly different argument was made by Karnail Singh:

¹⁰⁹ For the year 2011-12, the CACP estimated rent for leased-in land for the paddy crop to be a mere Rs 4334.12 per hectare, or Rs 1733.65 per acre (CACP 2014). More recent figures are not available, but it is clear from this that lease rates have been underestimated by the CACP at least until very recently.

It is definitely easier to earn money [by leasing-out land]. Also, some farmers do not have '*tajurba*' [experience] of farming; you can also call it '*tareeka*' [proper way] or '*samajh*' [understanding]. Some know exactly how to do it well. The difference is like between a farmer who goes from shop to shop to get the exact chemical and one who asks the shopkeeper and takes anything that the shopkeeper gives.

Here the decision to lease-out land is related to the ability to farm well. While this was not an argument made often, it is a factor referred to indirectly in the previous quote as well where Gurjeet Singh states that he simply does not know any farming and would have to lease-out his land eventually. This raises some important issues about diversification among farmers and disenchantment of the youth from farming, to be explored in Chapter 10.

Another aspect that needs to be highlighted in terms of who is leasing-out and leasing-in the land is a regional one. There are far more NRIs from the Doaba region than from the Malwa region. Further, the land in Doaba is also argued to be *retli* or sandy, and therefore, less suited to paddy production than the land in Malwa. This means that in Doaba there is more land available to be leased-out and relatively fewer people wanting to lease it in; accordingly, the lease rates are much lower than in the Malwa region, i.e. Rs 30,000-35,000 per acre p.a. This was, and is, a key factor in enabling the 'potato kings' of Doaba to expand the area of their work over thousands of acres.

On the other hand, in eastern Malwa, where Khanna is located, the demand for leasing-in land is much higher than the supply. All my respondents, including those from other parts of the state, unequivocally asserted that this area is the most fertile part of the state; it is, therefore, no surprise that its lease rates are among the highest.

Even within this fertile region, rates vary geographically. In the villages that are very close to Ludhiana, i.e. in Sahnewal and some parts of the Doraha sub-division, lease rates are much lower at Rs 35,000. This is because more people in those areas have jobs or businesses in the massive industrial centre that is Ludhiana. Then, for example, there are a handful of farmers from Malerkotla (Sangrur district), 45km

from Khanna, who have leased-in agricultural land very close to Khanna town, as the prices received for vegetables in Khanna are higher than in Malerkotla.¹¹⁰

There could also be differences between villages. Earlier it was mentioned that potato cultivation impacts lease rates due to the high rates of profits to be earned. In villages where potato cultivation becomes popular, there is a higher demand for leasing-in land. In Amloh, one such area, the land-lease rate was as high as Rs 60,000 per acre in 2014-15. The demand for leasing-in land is also high among farmers in villages like Uchakhurd where cauliflower production has proved to be so profitable that not a single large landowner has leased-out his land. It is common among farmers in this village but also in others to lease-in small and large holdings in other villages. Some respondents argued that some villages have more land than others and that determines whether or not farmers are able to lease-in land within the village.

There are indications of subtle but significant social changes as a result of the importance of land-leasing, although this research could not study this in detail. For example, one farmer said:

Earlier, there were five to seven people in the village who leased their land to those they were related to. Now, they see relations as well as money. They take money also and they do not let you feel that you are being pinched also. They will say, 'I can give it to you, but an outsider came and offered Rs 40,000'. So, I will also have to give that much money. Then they get a lot of work done for free. For instance, if I am doing something on the leased-out land with a trolley or a tractor, the lessor will say, 'You are doing it on the leased-out land anyway, do it on mine as well'.

Yet another farmer said:

The person who takes [land on] lease becomes like a '*free naukhar*' [servant with no payment] for two people – he becomes the naukhar for the lessor who gets the money for his land but also gets his land cultivated, plus any odd jobs; then he becomes the naukhar for the arhtia to whom he takes the crop. That is it – the lessee is a '*free naukhar*' for two people.

The two quotes above point to two issues. Firstly, there is an increasing monetary consideration in leasing-out land. This would not be surprising for smallholders for whom the rent may be an essential element of their meagre income. This could also

¹¹⁰ Malerkotla is famous across the state for its vegetable farmers.

be a social consequence of the high level of commercialization of agriculture. But as the quote above also indicates, it is not that ‘relations’ have become unimportant. A few farmers included in the survey lease-in land from their brother(s). While in some cases, the lessor brother clearly demands the ‘market rate’, in at least one case he accepts any reasonable amount paid by the lessee brother for the sake of safe custody of the land.

The second issue that emerges is the ‘free work’ that the lessee has to do for the lessor. In many cases, the farmers, small and large, who lease-out their landholdings, continue to rear cattle to produce milk for household consumption and/or for sale. The farmers need fodder for their cattle and it is common for the lessors to demand some of this fodder (especially ‘*toori*’, made from the wheat crop residues) from the lessee. The lessee may also have to sell some milk from his cattle to the lessor. These kinds of exchanges would be important when the lessor and lessee come from the same village, and if the latter wants to continue leasing-in the same land. Farmers usually want to lease-in land that adjoins their own, as it makes irrigation and other operations easier to manage. Such farmers would want to oblige their lessees and quite commonly pay a few thousand more than the prevailing rate to secure their tenancy. ‘Free naukar’-type relations may also be more likely when a large farmer leases-in land from a smaller landowner, but I was unable to verify this.

8.2.2 *Fissures in the Lease Market*

In the chapters on paddy, wheat and potato, I showed that farmers faced some difficulties with each crop in 2014-15. The prices of basmati and potato fell considerably. Wheat and potato also suffered due to untimely rains. The wheat yield was also affected and this was followed by problems in government procurement.¹¹¹ While individually some farmers may have managed to get adequate returns, overall this was an exceptionally bad agricultural year. As land-lease deals are made well in advance of the beginning of the next agricultural year, many deals for 2015-16 had already been made before the problems with potato and wheat emerged. Further, some of these deals had been made at similar or even higher rates than the previous year.

¹¹¹ Payments by sugar mills for sugarcane, another important crop in the region, had also been severely delayed (Bangad 2015; HT Correspondent 2015).

In early May 2015, however, local newspapers started reporting that lessees were refusing to pay the high lease rents. This was the first time that such a thing had happened in the area. Lessees and lessors began mobilising collectively to secure their different interests with respect to land-leasing. In several villages, lessees formed committees which declared they would not pay more than Rs 35,000 per acre for land with a tube well and Rs 30,000 or less for other land. Lessors asking for more money and lessees offering more money would be penalised by the committee.¹¹² Lessors, who in turn would suffer from such a decline in rates, were also reported to have come together at some locations, arguing that lease rates are decided by mutual agreement between lessor and lessee and the former are not the exorbitant rent extractors they were being made out to be (Iqbal 2015). There is certainly some truth to that.

The issue here was not just that lessees had suffered losses. For smallholder lessors who depended on lease rent for their subsistence, the decline in rent would be a big blow. According to Karnail Singh:

If you ask me, it [the formation of committees and reducing lease rates] is not a good thing. They have reduced the lease rates from Rs 45,000 to Rs 25,000-30,000. Those leasing-out land are also not big farmers; they are *kamzor zimidars* [weak farmers]. The strong farmers can even farm on their own land, or if they have less manpower, then can lease it out.

It is not clear if these committees had any legal standing, and it is more likely that they represent a kind of moral force of the ‘community’. The community itself is, needless to say, not homogenous. On following up with my respondents on this issue, it emerged that while some farmers were abiding by the rules of the committee, many others were not. Jagjit Gill commented on the situation:

There are two kinds of people. There are those who have turned away from the deal entirely – they have said that you can keep our shahi [payment] but we will not take the land; the others are *zabaan ke log* [people who honour their word] – they have given their word so they lease the land in after negotiating Rs 4,000-5,000 less than what was decided.

Another farmer who leases-in a large area said:

¹¹² See Boparai (2015), B. Singh (2015) and Dangon (2015). In one village, for example, the penalty was Rs 50,000 to be paid to the village gurdwara.

What will the committees do? If we have given someone our word [*zabaan*] earlier, then how can we retract? Then people will not rent us land in future; tomorrow we have to show our face in the community also. If sometimes the profits are very high, it is not that we share the profits with the landowner. I am leasing land, so is he [pointing to someone sitting next to him]; V Singh did not even come to the committee meeting precisely for this reason. The land-lease rates also increased because many farmers leased-in land to grow basmati and potato because there was profit in it last year; now that there is manda [recession], those people have also left and do not want to do farming on lease.’

This episode showed the repercussions of problems in the crop markets for village-level land dynamics and revealed the strains created in the social fabric of the village by the nature of agrarian development in the area.

8.3 The Market for Land Sales

Around the mid-2000s there was a huge growth in urbanisation around Chandigarh and Mohali; these cities were stretching out, as cities do, into the hinterland. Private property developers acquired large swathes of land in the villages on the Punjab side of the tri-city area (Chandigarh, Mohali (Punjab) and Panchkula (Haryana)). These developers are said to have bought the land from the farmers in these areas at rates as high as tens of millions per acre. Many of these farmers, locally known as *Chandigarhiyas* (people from Chandigarh), used this money to purchase land in other parts of Punjab (also see V. Sharma 2012).

The boom in land sales in the field area between 2007-08 and 2011-12 was a direct result of the same phenomenon. At a rough estimate, agricultural land was being sold for anywhere between Rs 5,000,000-8,000,000 per acre and in some cases Rs 10,000,000 per acre. It should be noted that these are not the government rates at which land is sold. By law, land has to be sold at the government rate which is usually less than the ‘market rate’ and the income from the sale is taxed. By declaring the sale of land at the lower, government rate, the farmers evade taxes and administrative fees that they would otherwise have to pay.¹¹³ A few farmers also reported that they purchased some land in the name of their mothers or wives as women are taxed 2% less than men.

Jagjit Gill told me:

¹¹³ This explained why many farmers were reluctant to share details of their land transactions.

Ninety per cent of all land sold was bought by people from the Chandigarh-Mohali area; and the first preference of these people is Amloh because it is only 65-70km from Chandigarh and the soil is good enough to support three crops. Only if they were not able to work out deals in this area, did they go to Sangrur or any other place. If you go, for example, to the area between Sirhind and Rajpura, the land there is *daakad* [hard and lumpy] and one can only take two crops there – wheat and paddy – they do not grow potato there.

Indeed, not just Amloh, but Khanna and Ludhiana district more generally were also preferred destinations for such land purchases. Yet again, we find the agricultural productivity playing an important role in determining the value of the land. While the Chandigarhiyas sometimes settled and farmed in the villages where they bought land, they usually leased the land out.

In a village near Paunpura, this development in the land market had some interesting consequences. This village is particularly famous for the cultivation of potatoes in Khanna, and a vast expanse of the crop can be seen across this village during the growing season. Many farmers in this village had suffered losses in the risky business that potato farming can be. These farmers, including large farmers, sold part or all of their land to these new purchasers, used the money to pay off their debts, and now lease-in what was their own land for cultivation at high rates. Unlike other villages around Khanna where there are normally no more than five landholding Chandigarhiya families, in this village there are around twenty-five such families. A farmer from Paunpura told me,

You will not be able to figure out there whether people have sold their land or still own it. The landowners who live outside the village keep increasing the lease rates and charge exorbitantly [the rate there is about Rs 65,000] and because the *tagde* [strong] farmers sold their land and pocketed the money, they have the extra money to pay the higher lease rates. As a result, the small farmers, who cannot pay such rates, suffer.

The purchases by the Chandigarhiyas certainly injected money into the economy of the fieldwork area and increased land prices across the state. Reportedly, many farmers in the area sold some or all of their land during the boom years, and either entered a different business and/or invested in land elsewhere. Farmers with enough surplus money, with or without making any land sales, invested in agricultural land in areas where prices were cheaper than in Ludhiana district, such as Sangrur or Hoshiarpur. A chain of land transactions and a hierarchy of demand for land in

different areas developed. As one farmer said, ‘People sell more expensive land from Chandigarh and buy it in this area; they sell more expensive land here and buy land in Barnala and so on’. These transactions are undertaken as speculative investment, and the land sold off when the need arises. In the interim, the owners pocket the lease rents on these plots.¹¹⁴

In the survey data, only nine farmers had sold any land in the ten years before 2014-15, though it is not known if it was sold to Chandigarhiyas. On the other hand, 20 had bought some land over the same period. This again could be explained by the predominance of large farmers in the sample. Those who sold land almost always sold agricultural land. Among those who bought land, some bought agricultural land, while others bought land within the village for residential or dairy purposes. Technically, nobody has *malkiyat* (legal individual ownership) over any land within the *abadi* (residential) area of the village. However, transactions over residential plots happen and plots can be quite expensive at Rs 100,000 for one *bigha* (0.2 acre) or Rs 500,000 for one acre. In a couple of cases, small plots of non-agricultural land were also reported to have been bought.

Some large farmers buy small parcels of land almost every year. Sunny, for example, who owns 38 acres in total, has bought 10-12 acres of land in the last 10 years. Another who owns 10 acres said, ‘I bought 6 bighas [1.2 acres] in instalments of 3 bighas [0.6 acres] each in Ladmajri two to three years ago at Rs 400,000 per bigha (Rs 2,000,000 per acre). I also sold 5 acres of my land to someone from Chandigarh and bought 5 acres adjoining our existing land so that all our land is together. Now we lease-in the land that we sold and farm it’. Another farmer who owns 12 acres said that he bought 3 acres in a neighbouring village at Rs 3,700,000 per acre from a landowner who is a doctor residing in Amluh. He also bought 2.5 acres in Uchakhurd from two people at Rs 3,000,000 per acre. In fact, small plots of land fetch lower rates per acre than a large plot. This, again, has implications for the money that smallholders would be able to get by selling their land. Most sales by smallholders were distress sales. One farmer who owns 3 acres reported that he sold 3 bigha (0.6 acre) in 2013 at Rs 400,000 per bigha as he had suffered a major loss as

¹¹⁴ Sud (2017) argues that speculative investments in land at the sub-national level in India are informed by ‘networks of information and sociality’ (85) between the State and potential investors – firms and individuals.

a result of land-leasing. Another farmer who owns only 0.5 acres sold 0.2 acres as he needed money for his wife's medical treatment.

Starting in 2012/13, the price of land across the state fell drastically.¹¹⁵ Land that was being sold at Rs 8,000,000 per acre until the beginning of this decade was fetching barely Rs 2,000,000 per acre at the time of fieldwork. Large amounts of money are said to be locked in such speculative investments. This is true not only for investments made by large farmers but also for urban traders and residents. For example, a former partner in the feed mill of one of my key respondents (Ashok Bahl) in the mandi had turned to property dealing; he had bought some property intending to sell it once prices had risen a certain amount – but the prices crashed. In fact, apart from the money crunch due to the crash in basmati prices, the decline in property and land prices is also argued to have contributed to the difficult financial situation in the local agricultural market. During our meeting, this person said:

It was because of Chandigarh sales that the rates in the rest of the state also shot up; now there is *manda* [recession] in Chandigarh so what can one say about the rest of the state? The situation is so bad that the rates of cement have decreased from Rs 345 to Rs 250 per bag; it's the same with bricks.

He and Bahl went on to talk about a feed mill in Khanna that had apparently gone bankrupt due to its large losses; they also mentioned a prominent businessman in a neighbouring town who had recently committed suicide for similar reasons. They commented that people who are 'in a hurry and do wrong things' are bound to end up like this. Rumour also had it that in one of the up-market housing colonies being developed on the outskirts of Khanna town, the banks had to take possession of every single house due to loan defaults. Ascertaining the veracity of these claims or drawing empirical connections between these different aspects was well beyond the scope of this research, but they helped to paint a picture of the kind of repercussions the property market slump had for less obvious aspects and actors of local, small town economies.

¹¹⁵ It was beyond the scope of this research to establish the reason for this. However, it may be argued tentatively that this was linked to the decline in real estate across the country (see Nandy 2015). There may have also been an impact on land prices due to demonetisation in 2016 but this happened after my fieldwork period.

Farmers, too, were disappointed by the drastic drop in the price of land. This was particularly true for farmers with small landholdings and meagre resources who were counting on the sale of land for important personal or economic concerns such as indebtedness. One farmer said

Until two years ago, the [sale] rate of land was Rs 10 million an acre. But now the rate is Rs 4.5-5 million. That is also the case only when 4-5 acres are being sold together. If someone needs money and wants to sell a single acre, he will find it difficult to sell it for Rs 2-2.5 million.

Another told me, 'In 2011-12-13, it [land prices] went as high as Rs 7 million per acre; now it is Rs 2-2.5 million per acre – actually, nobody wants to buy it even at that much. But those who need the money will sell their land at this rate'. Indeed, one of the survey respondents, who owned 3.5 acres and had been leasing it out for two years, was planning to sell two acres in 2015 as he needed the money for his two daughters' weddings.

In understanding the land market, it should also be recalled that successful capitalist farmers in Punjab have been buying land outside the state, especially in UP, at least since the early years of the Green Revolution (Chapters 4, 6): such land in Punjab was more expensive and rarely available. I met two farmers with some land in UP. There are also exceptional cases where a farmer holds land in partnership abroad, for example, in Italy. While in my survey, no farmer reported having land in another state, I was informed that this trend continues, although perhaps less so than before. One farmer said, 'People are still buying land in other states. The price of land in UP is Rs 1-1.2 million and here it is Rs 5 million. They sell some here and buy land in other places. But there is *firqaparasti* [sectarianism] in India. People are also scared that 1984¹¹⁶ will happen again'. However, some argue that now the lease and sale rates in states like UP have also increased considerably. This implies that the possibilities of expanding land ownership both within Punjab and outside it are limited and it is an option accessible only to fairly rich farmers.

8.4 Conclusion

This chapter centred land in the analysis of agrarian change and accumulation. Land-leasing is crucial to this, and both small and large landowners constitute the supply

¹¹⁶ This is a reference to the anti-Sikh riots of the 1980s.

and the demand side of the land-lease market in the fieldwork area. Lease rates are tied closely to crop prices, and the fall in prices of several crops in 2014-15 led to an unprecedented response by the 'community' in an attempt to reduce lease rates. This exposed the strains and contradictions underlying the market, especially because high lease rates are important for smallholder lessors. It also brought to the fore the tensions in the way inter-personal relations are implicated in land-lease deals. In other words, land use, control and access are mediated by law, economy and custom.

Land is not only an asset when cropped, leased-in or leased-out, but also in terms of its sale value. Sale of land is an easy, though not always desirable, way of obtaining cash. The property boom in Chandigarh had a huge impact on the value of land in the field area; larger farmers used this as an opportunity to accumulate and smaller ones to alleviate distress. The crash in prices has, therefore, reduced the value of land as an economic 'safety valve' and has been met with considerable disappointment and increased the immediate pressure on even successful farmers. This dynamics of the land market also brought to light the, perhaps unanticipated, links between different aspects of the regional economy.

Finally, the lens of land allows us to see some of the ways in which the dynamics in the economy outside of agriculture is relevant to accumulation within agriculture. The value of land, both in terms of sale and lease, has been found to be dependent not only on crop profitability but also developments in the wider economy, for example, property prices. Moreover, diversification by farmers to include other economic activities or migration to other areas creates the opportunities for other farmers to expand their area of cultivation. In other words, in land-leases and land sales, the accumulation strategies of different farmers often intersect. I also showed that a focus on the local area or village alone would render the understanding of both land dynamics and accumulation incomplete, since leasing and purchase/sale of land is often done across villages and regions.

Chapter 9. Circuits of Credit

Credit relations have been a reoccurring issue throughout the foregoing discussion. Here it becomes the centre of analysis, with the aim of understanding the different types of credit available as well as the ways in which credit structures power relations among farmers and traders. Table 9.1 below gives a snapshot of the key credit relations in the field that impact agrarian accumulation. In what follows, I explore the politics involved in each of them.

Table 9.1: Key sources of credit for farmers

Source of credit	Form of credit	Rate of interest	Form of repayment	Other notes
Arhtia in the grain mandi.	Cash – both with the cropping cycle and through the year.	18-36% p.a.; interest applied on interest if not repaid on time.	To be repaid at the time of sale of crop (bi-annually). The arhtia deducts amount due from payment by buyer; can also be repaid in cash by farmer.	Arhtias may apply different interest rates to different farmers.
Village-level primary agricultural cooperative societies (PACS).	Short-term agricultural credit – 50% in cash, 50% as fertilizers.	7% p.a. with 3% subsidy if the money is repaid on time.	Cash to be paid at the time of sale of crop (bi-annually).	Considered inadequate by many farmers.
Public or private commercial banks.	Kisan Credit Card (KCC) Scheme – short-term agricultural credit (referred to as ‘limit’).	7% p.a. with 3% subsidy if the money is repaid on time on the first Rs 300,000; 12-13% p.a. on any amount over Rs 300,000.	Cash to be paid at the time of sale of crop (bi-annually). The principal amount can be returned to the farmer (rotating credit).	Arhtias often involved in rotating KCC credit.

Source: Own fieldwork 2014-15

9.1 Cooperative Societies

Village-level PACS have existed in Punjab since before Independence; one survey village PACS, for example, was established in 1923. The Government of India took over most of these societies after Independence. Chapter 3 revealed that cooperative credit was particularly encouraged in the Green Revolution period, although it has

had limited success in the state and benefitted large farmers much more than the smaller ones. This research sought to understand how the system of cooperative credit works and how is it used by farmers.¹¹⁷

All villages are served by one society, either based in their own village or in a neighbouring one. One society can apply to serve two villages. The societies in two of the survey villages served two villages. Cooperatives extend short-term credit to farmers twice a year for the production of the rabi and kharif crops. They also extend other kinds of credit for large agricultural or other social and economic expenses.¹¹⁸ The money for this credit comes from the National Bank for Agriculture and Rural Development which forwards the money to the Punjab State Cooperative Bank Ltd., which then forwards it to district-level cooperative banks and from there to the PACS.

Short-term credit is the most common form of credit taken by farmers.¹¹⁹ Most farmers had an account (*khaata*) in the society, commonly referred to as a 'copy'. The credit extended by the society to farmers varies by both landholding and scale of investment. In the survey, I found that farmers' credit accounts with the PACS extended over a wide range (from Rs 2,000 per acre of land owned to Rs 30,000 per acre land owned p.a.). Interest is charged at 7% p.a. and a 3% subsidy is given if the money is repaid on time.¹²⁰ About half the amount is given as cash and half as fertilizers supplied by the cooperative itself.

Most farmers find the amount extended by the cooperative woefully inadequate for their needs.¹²¹ A farmer who has an operational holding of nearly 50 acres said,

The limit given by the cooperative society is not enough, it does not even cover the costs of our fertilizers; the amount of farming I do, I should get at least Rs 1,000,000. We can get more from banks, but they charge higher interest. So if you ask me, the limit in cooperative societies should be increased.

¹¹⁷ It does not study the detailed profiles of different societies, their successes and failures, or even the politics of their administration.

¹¹⁸ Cooperative societies may also rent out implements (*sand*). In this, some societies are better than others inasmuch as some have more and many different kinds of implements than others.

¹¹⁹ However, one farmer reported that he had taken a long-term loan of Rs 80,000 from the cooperative to buy a tractor.

¹²⁰ Interest rates barely keep up with inflation. Such low interest rates may be linked to the fact that cooperatives in India were formed to provide an accessible alternative to the exploitative moneylender (Bell 1990).

¹²¹ The central government has further reduced the funds allocated for this (Dhaliwal 2015).

This is understandable. The combined cost of producing paddy and wheat alone comes to at least Rs 25,000 per acre. The credit from the society may, at best, be just enough for these expenses but with nothing left over for cultivating any other crop – especially more cost-intensive crops like potato and cauliflower. In the household survey, excluding those who leased-out their land, 12 farmers, 5 small and 7 large, reported that they did not have an account with the cooperative (Table 9.2). Some farmers also noted that they had set up an account for a certain amount but never or rarely used it. Apart from the money being inadequate, the societies simply do not have many of the fertilizers and chemicals that the farmers use. The ‘basic’ ones like urea and DAP are more commonly available than ‘special’ ones, especially those produced by corporates.¹²² Consequently, most farmers rely on private shops to purchase fertilizers and on other formal and informal sources for agricultural credit. Nevertheless, most farmers do have a credit account at the cooperative society because it counts for something; and for those who have it but do not use it, it serves as a potential emergency reserve.

Table 9.2: Farmers who have accounts with the PACS

	No	Yes	Total
Land leased-out	1	4	5
Petty producer	5	11	16
Small capitalist	0	13	13
Large capitalist	7	52	59
Total	13	80	93

Source: Own household survey 2014-15

9.2 Arhtias

In Section 7.1, the arhtias in the grain mandi were described as the chief source of informal credit for farmers across classes. Here this function is discussed in detail.

The greater part of the credit extended by the arhtia follows the agricultural cycle. Farmers mostly borrow before the production of major crops, i.e. paddy, wheat, and even non-grain crops like potato. Arhtias also extend credit for the large amounts of money required as land-lease rent, which have to be paid twice a year. Apart from these lump sum expenses, farmers may turn up at the arhtia’s door for a variety of

¹²² One farmer reported that chemicals produced by a TNC have started being sourced at the cooperative in his village.

other expenses, big or small; for example, for agricultural use, children's education or weddings, buying cattle, house repairs, etc.

Arhtias charge interest at 18-36% p.a. or 1.5-3% per month on the money that they lend to farmers at any time of the year. Until 10-15 years ago, the most commonly applied interest rates used to be 2-2.5% per month, but this has come down to around 1.5%. This is due to the expansion of banks and the increasing competition between arhtias (see below). The money has to be returned with interest once payment is made by the crop purchaser.

While most farmers return the money, in part or full, after the sale of the crop, some also repay small instalments before sale. The arhtia's ledger records the same.¹²³ If the farmer is unable to repay the loan through his crop, then the arhtia applies interest on the interest on the outstanding debt. For the next cropping season, the arhtia will still lend money, albeit a lesser amount. This is because he knows that the principal can only be returned when a farmer earns that money from the sale of his crop. In the meanwhile, he continues to apply, and potentially earn, a higher interest on the old principal. So, the credit carries over from one crop to another and even from one year to another. The amount of credit extended by the arhtia to a farmer and the interest applied depends on the former's assessment, at the very least, of the farmer's cropping area, the crops grown and previous repayment record. A higher interest rate is charged against greater risk.

It is obvious that the risks are higher for smaller farmers who, as seen in previous chapters, do not make substantial profits even on crops like wheat and paddy where an assured MSP is provided: small farmers are thus more vulnerable to arhtias and their exorbitant interest rates. Some farmers stated that smaller farmers are commonly charged 2% per month unless they have a good repayment record. But in the light of inadequate alternatives, farmers continue to rely on arhtias. As a farmer stated, 'without arhtias, *zimidaraan da kaam nahin chalega* [the needs of farmers will not be met]. Yes, the arhtias charge interest, but money for use is more important than the interest that will be charged; when you need money, you do not care how you get it if it is the only way.' On the other hand, in a telling commentary

¹²³ In the ledger, the index page has the page numbers and the names of the clients (farmers). On every farmer's page, there are columns for: the name of the farmer and his father's name, amount loaned and date, repayment made and date, and the mode of repayment.

on the attitude of arhtias towards farmers, one arhtia quoted a popular saying among traders, '*Jatt aur barseen kadi vi nahi marde*' (Jat and *barseen* are never ruined). *Barseen* is a kind of fodder that once planted needs no work or inputs and can be harvested for several months; 'the more you cut it, the more it grows'. Jats, meaning farmers, he said, are just the same.

9.2.1 *The Wasteful Farmer*

Many arhtias state that it is not only small farmers that have poor repayment records; large farmers often do, as well. Arhtias argue that the main reason for this is that farmers engage in wasteful expenditure and no longer do any work manually. Jaspal Singh said, 'Things are difficult for small farmers but... If you spend beyond your means, then you will be indebted. If you have the money, buy a five-wheeler. But if you do not have the money, then why are you buying a two-wheeler even?'

Many farmers also subscribe to these views but Amandeep Singh, a large capitalist farmer who cultivates cauliflowers, strongly disagreed:

I do not agree that farmers waste money. A farmer who has less land also has household expenses. He also has to educate his children or marry them. That is why there is a cycle of credit with the arhtia. They spend what is supposed to be spent. A *bania's* [trader's] shop is merely 2-4 *biswa* [0.01-0.02 acres] but he still has big cars and big houses. But if a farmer who has 100 *biswa* [just over an acre] of land buys a motorcycle also, they say he is wasting money. This thinking is wrong. Farmers are also humans. Their children also have aspirations and desires; they also want to wear good clothes like their friends or have the same things that others in their circle have. If you go to our village, every farmer who has 2-4 acres has leased-in 20 acres; he owns a tractor and has all means [mod-cons] in his house. These have been acquired through honest means; there is no cheating in what the farmer does.

It is clear from the above that farmers are often blamed for their problems, and this also raises the obvious issue of whether it is legitimate to dismiss the social or consumption expenses of farmers as 'wasteful'. I do not dwell on such questions, but rather note that these expenses constitute a substantial expense for farmers and generate a demand for credit.

The survey data shows that different farmers spent anywhere between Rs 300,000-800,000 on the weddings of sons or brothers. For daughters or sisters, the reported range was Rs 800,000-1,800,000. Similarly, on building new houses, the reported

range of expenditure for large farmers was anywhere between Rs 1,000,000-6,000,000. Smaller farmers rarely reported building new houses; in the few cases that they did the expenditure was Rs 300,000-500,000.¹²⁴ Expenses on house repairs were mostly around Rs 50,000. Evidently, these are large expenditures to make, even if those on houses are spread over several months.

Another oft-cited ‘unnecessary’ expenditure is that on tractors. Several respondents argued that these tractors are under-utilized and farms are said to be over-capitalized. They said this was partly because banks very willing to make loans for this and partly because Jats are under the grip of the sentiment of *rees* or comparison with others, i.e. will spend beyond their means to match what is spent by another Jat. One farmer commented,

There is a saying in Punjabi – ‘*Chuhde laye le gohe ne, Jatt laye le lohe ne*’. The saying means that the Dalits could not develop because they were stuck working with cow-dung; the Jat could not develop because they did not stop buying machinery. First they bought two-cylinder tractors, then four-cylinder ones. The small tractor can also do the same work. But people want something because their neighbour has it, whether they need it or not. In this way, the Jat is simply giving his money to companies. They buy trucks, tractors, combines – loans are easy to get.

While it is beyond the scope of this research to challenge the framing of expenditure on tractors in this way, it should be noted that the literature points to the time-bound nature of Green Revolution technologies (see Byres 1981). This means that farmers with different landholdings also needed these machines for timely completion of agricultural operations and to remain competitive. Moreover, tractors are used not only for farm operations but also for transportation, especially of crops.

Farmers may also turn to arhtias for other large or small expenses, as mentioned earlier. Such is the dependence of farmers on arhtias that their relation was described by one farmer as that of ‘nails and fingers’. A former arhtia said, ‘When the farmer’s buffalo dies you must understand that it is the arhtia’s buffalo that dies’. But this kind of dependence is crucial to the success of the arht business. While the arhtias commonly criticize the ‘wastefulness’ of farmers, it is what they feed on for their own business interests.

¹²⁴ This is most likely for building an extension to or up-grading an existing house, rather than building a whole new house which would cost much more even at its most basic.

Of course, there is also some risk in extending credit. As the former arhtia quoted above said, ‘It is not a stable business; you are trying to make money out of someone who does not have any money. Farmers live hand to mouth’. This is truer of smaller farmers than larger ones.¹²⁵ Farmers unequivocally argue, however, that arhtias hedge the risks of their moneylending very well and claim that they do not incur any losses, or at least any major losses. More importantly, the arhtias’ self-representation of vulnerability is a gross overstatement due to the way government support works. Since the government is the main buyer of wheat and paddy in the market, the arhtias know that farmers are guaranteed an MSP payment. In fact, it is precisely because of the absence of such an assured buyer and assured prices that the arhtias in the sabzi mandi do not extend credit to farmers, or only in exceptional circumstances.

In other words, the arhtias hedge their risk of extending credit against the assured role played by the governments in the wheat and paddy markets. Sharmaji, an accountant at one of the arhtia shops in the grain mandi, captured this dynamic quite succinctly when he said, ‘*Jis din Sarkar ne haath kheencha, yeh khatam hai* [the day the government pulls out from this, this will be over]. This arht work will last only two to three more years’. Many arhtias fear the decline of this business because of the central government’s efforts to introduce direct payments to farmers and the recommendations of the Shanta Kumar Committee Report which makes a case for the central government to withdraw from procurement in Punjab. The repercussions of such a policy have been anticipated through the experience of basmati sales, discussed in Section 7.1.

Moreover, even though farmers’ extreme dependence on the arhtia forms the dominant narrative, the household survey revealed a counter-intuitive result. Figures in Table 9.3 show that 58% of all farmers in the survey do not take any loans from arhtias. Indeed, many of the large expenses identified above were serviced by farmers through savings and/or formal credit (see below). This is again partly a bias of the sample towards large capitalists and partly the fact that the revival of rural credit in the post-liberalisation period (Section 9.3) has made a difference to farmers, especially large capitalist ones. Even though the sample of petty producers and small

¹²⁵ I found two cases where small farmers had not paid the principal and/or interest to the arhtia.

capitalist farmers is smaller, it is notable that 13 out of a total of 29 households (approximately 45%) in these categories also reported that they did not borrow from arhtias. However, Section 9.3 shows that that arhtias continue to be important indirectly for servicing formal credit, and overall, they continue to be the banker of the last resort for farmers.

Table 9.3: Number of farmers borrowing from arhtias

	N/A*	No	Sometimes	Yes	Total
Land leased-out	5	0	0	0	5
Petty producer	3	7	1	5	16
Small capitalist	0	6	2	5	13
Large capitalist	2	39	5	13	59
Total	8	54	8	23	93

Source: Own household survey 2014-15

*N/A either because they have leased-out their land or they do not cultivate any food grains.

Before moving on to the next section it should be highlighted that yet another source of informal credit for farmers, albeit in kind, is the input supplier. Many farmers purchase inputs from dealers on credit, i.e. they take the seeds and chemicals required for a crop and pay when the crop is harvested and sold. The input dealers often charge a discretionary interest amount on the total cost of the inputs. Such relations are more likely when the farmer is a regular client of the input dealer and/or the input dealer has a particularly good reputation in terms of his expertise in the business. Some farmers also make upfront purchases of the inputs, either with their own money or that they have borrowed from the arhtias. Further nuances about the credit relations between different kinds of farmers and input dealers could not be explored in this research.

9.2.2 *Financing the Financers*

The scale of an arhtia's moneylending operation determines the amount of crops that arrives at his shop. However, moneylending is contingent on how effectively he can mobilize finance. This is important to understand to gauge the constraints of the arhtia's work.

One source is obviously the arhtia's own capital. This may be inherited from family and/or acquired through other business interests. Apart from this, the oldest and most popular way of financing the moneylending operations is through *dasti*. Dasti is

commonly described as ‘*do number*’, which means illegal money or monetary transactions. An arhtia-cum-rice and feed mill owner, Vinay Gupta, said, ‘It refers to lending between friends and relatives. We note it in our *kacha* books [informal ledgers]. It is very prevalent in all these mills also [in addition to among arhtias]. The reputation of the debtor also matters while lending’.

The concept also extends to non-monetary transactions. Ashok Bahl, a broker-cum-rice mill owner, told me,

It includes advances, payments, everything. If an arhtia sells paddy without a receipt, then it is dasti. Then it goes to the mill owner, he has no bill for it; there will be no bill on the by-products either. All this is dasti. All payments in cash without bill are also dasti.

[So what if someone does not return it?]

Of course they return it, don’t they have to survive in the business?!...

[And what proportion of the business of mills, brokers, traders, etc. is done in dasti?]

At least 50%, even 80%...

[What about arhtias in the mandi?]

Among them also at least 10-15% of the work is done like that.

Arhtias may finance their lending operations through dasti by borrowing from other arhtias, mill owners, relatives or families that are solely in the business of moneylending, all based on ‘good faith’.¹²⁶ Arhtias usually borrow at 1% per month, sometimes 1.25% or 1.5%; the rate may vary as a function of the relations between the lender and the borrower, the timing of the loan or the result of negotiation.¹²⁷ According to Vinay Gupta, ‘For example, at the start of the season, when paddy has to be sown, there is more demand; in that case more interest can be charged. But then someone might say that even the bank is lending at this interest rate, reduce it; this is how it happens’. In general, there is no date to return the principal amount but

¹²⁶ One arhtia said, ‘We take only Rs. 500,000-1,000,000 from financiers and friends. Nobody will lend Rs 5,000,000. Then we have to pay to interest on that.’

¹²⁷ I received quite different responses about how the credit has to be returned when borrowed from a mill owner. In the case of arhtias, one said, ‘What is given in cash has to be returned in cash. What they buy from us is different from the financial relationship. But this may also depend on trust; if the flour mill, for example, has advanced some money and has also bought something, then if for some reason he feels that he will not get his money back, then he will naturally deduct some money from the payment’. Between mills and brokers, one mill owner explained that the repayments are more commonly made in kind, although not always.

there are dates for the payment of interest, corresponding to the time when in the crop cycle the farmers are supposed to repay the arhtia. Therefore, delays in payment for crops strains the flow of cash in the entire agricultural economy. In general, however, as long as the government keeps paying, there is enough flow of money in the economy.¹²⁸

A relatively more recent source of dasti is credit from large farmers.¹²⁹ A few arhtias and a few large farmers admitted to this and most of them agreed that only a very small proportion of farmers did this. Sharmaji, an arhtia's accountant, said, 'There are only 5% of farmers who even have the ability to lend money to us, but when they do, we give them an interest rate of 12% p.a.' In the survey, six large farmers admitted to lending money to the arhtia either regularly or occasionally, though they did not give details of the amounts. Sunny is one of them:

If we have a lot of savings, then we lend money at 1.5% per month interest to an uncle who is an arhtia in Machhiwara. The return of the principal is done in season, when the crop comes – that is the cycle of the arhtias. The payment of interest depends on the deal we have with them; if there is a deal of one year then the interest will be paid after one year; if there is a deal for six months, then the interest will be paid after six months – if the interest is not paid in six months then there is interest charged on the interest.

A farmer-cum-seed and chemical shop owner in Doraha explained:

Arhtias convince the rich farmers that do not keep their money in the bank to lend to them. In the bank, the interest is 8% + TDS [Tax Deducted at Source]. With the arhtias, they get an interest rate of 18%, which is almost double. In this way, arhtias lend more than their capacity. Then when bad debt happens they have to run. Every year, one or two such cases happen in Khanna. In Doraha also, there have been a few cases and there will be more – we live here, we know what is going on. When these arhtias cannot return the money of those from whom they have taken the advance, the latter naturally come after them.

For farmers who do this, it could be considered as a kind of diversification. But in terms of credit relations, it is the opposite of the exploitative farmer-arhtia relation

¹²⁸ Given the significance of such 'illegal' money in agricultural markets, cash flows were extremely important and are likely to have been impacted by demonetisation in 2016 (see Madras Courier 2017).

¹²⁹ This is not commonly admitted to by arhtias, perhaps because they consider farmers to be beneath them in status and do not want to be known to be borrowing from them. Rich farmers, on their part, are also reluctant to admit to this because it is illegal. Some farmers and arhtias also say that they leave their earnings with the arhtia without charging interest sometimes, but others say nobody would leave their money anywhere without interest.

discussed in the literature; here the arhtias' business depends on such farmers taking out loans. Presumably, such farmers, if they grow any food grains at all,¹³⁰ would have more leverage with the arhtias for the timely sale of their crops at MSP or good market rates, whichever is applicable.

Another source of credit are loans (called 'limits') extended by commercial banks at an interest rate of around 10-11% p.a. to arhtias for lending to farmers. Several arhtias said that all but a few arhtias in the mandi have limits with commercial banks, ranging from Rs 2,000,000 to a few tens of millions. Such a scheme has existed as a part of priority lending for many decades now. It could not be ascertained if the arhtias' uptake of this has changed, although two associated it with the strain on cash flow in the economy as a result of the crash in basmati prices.¹³¹ Jaspal Singh, however, is completely against making such a limit:

If we make a limit, then we will spend it. Our own money doubles in about three years; we earn Rs 1,000-1,500 on each trolley that comes in. Similarly, someone else's money will also double and we will have to pay it. The HDFC [a bank] people keep telling us to make limits of Rs 2,000,000 or Rs 2,500,000 and so on. If we give one indication, they will arrange everything in one day. It is not about making a bank limit, it is about creating a relationship. Now this farmer needed Rs 50,000 but I did not have that much with me. I just had to go to the bank manager and he gave me the amount in cash, no questions asked... If I give someone a loan of Rs 100,000 and he has crops worth Rs 2,000,000, then he may or may not return Rs 100,000 in full. But I will have to return the amount in full with interest to the bank every six months.

[Then how do the other arhtias pay the bank?]

Suppose I have a limit of Rs 5,000,000 and I get [crop sales] payments of Rs 1,000,000 during the season. The arhtia will not pay the farmer for his crop – he will make the farmer wait – '*abhi bahut tight hai, abhi payment nahin aayi hai*' [now is a very difficult time, the payment has not come yet]. He will collect the money and then give it to the bank with the interest and only then will he start making payments to the farmers.¹³²

¹³⁰ Two of the four in the survey who admitted to lending to arhtias do not grow any food grains, only cauliflower and other vegetables.

¹³¹ One of these two arhtias, among the largest in the mandi, said he only arranged this particular bank loan only after the delays in payments for basmati.

¹³² In reality, different banks have different terms for lending to arhtias. Nevertheless, this conversation shows why some arhtias are wary of borrowing from banks or avoided it as long as they could. Moreover, during fieldwork, I witnessed arhtias making farmers wait for money.

Overall, this discussion shows that having a wide trading network and building relations of trust are crucial for mobilizing the capital required for the arhtia's moneylending operations.

9.3 Commercial Banks

Commercial banks have been extending short-term production credit and loans for large production expenses such as purchasing a tractor or installing a tube well since the early years of the Green Revolution. However, their form and scale has changed considerably under liberalisation.

Short-term production credit is determined by multiplying the number of acres a farmer proposes to cultivate by the standard per acre rate for the crop. Previously, the money would not be released directly to the farmer, apart from a small component for labour. Instead, the money was released to suppliers of agricultural inputs. Karnail Singh explained:

Before, there were agricultural loans, like car loans; farmers took out a loan for a trolley or something else, did not buy the trolley but got a 'pre-sale' [i.e., intention to purchase] slip made from the dealer and gave it to the bank... The cheque is given to the seller of the product which is supposed to have been purchased. But the responsibility of repaying the loan is that of the farmer.

Loans of this kind continue to exist for the large production expenses mentioned above. However, as part of the financial reforms under liberalisation, the form of short-term production credit was changed in 1998 by the central government with the introduction of the KCC, also commonly referred to as 'limit'. The earlier system was thought to be too cumbersome and also did not allow farmers direct access to the funds or discretion over how they wished to use the money.

In the words of the branch manager of a public sector bank, KCC is 'the working capital or a crop loan. It is an overdraft limit which has to be renewed annually; it increases 10% due to inflation every year'. While the initial KCC did not have a consumption loan component, in its current form it works as both production *and* consumption credit for the individual needs of the farmer. Under the KCC, farmers are given money based on their landholding (including leased-in land) and their

cropping history. This is assessed by looking at past records of cultivation¹³³ and the farmer's PACS repayment record. Interest on the first Rs 300,000 is 7% p.a., which is subsidized by the government by 4% in case of prompt repayment. On any amount over Rs 300,000 an interest rate of 12-13% p.a. is applied.

The limits have to be rotated every six months. This means that the principal *plus* interest have to be returned to the bank every six months, once after the sale of the kharif and rabi crops each. The farmer can get the principal or the limit amount back from the bank the very next day. Conditional on the limit being rotated, the farmer can continue to use the limits indefinitely. Land worth more than the value of the principal extended (in the case of one private bank worth 200% of the loan) is mortgaged with the bank as collateral for the KCC and the crop is hypothecated.

Farmers accept that bank limits have been hugely enabling for them. One remarked,

The hard-working farmers are coming out of arhtias' loans. The bank limit has been like oxygen for them. They are able to apply crop chemicals at the correct time. Earlier, the arhtia would say 'come on another day'. Even a delay of a couple of days badly affects the crop. Now they can withdraw money from the bank and make the payment.

This is substantiated by the results of the household survey. While only around 30% of the large farmers in the survey reported that they take credit from the arhtia (Table 9.3), 83% of large farmers reported that they have a bank limit (Table 9.4). Among small capitalist farmers too, a large majority had a bank limit. Interestingly, however, a majority of the petty producers in the sample did not have a bank account. The latter could be explained by a perception among some petty producers of limits being riskier than other forms of available credit and the bias of at least some banks against lending to farmers with small operational holdings, as will be seen below.

¹³³ The cultivation on every plot is recorded through a survey or '*girdawri*', conducted by the *patwari* or revenue officer.

Table 9.4: Number of farmers with a KCC account

	No	Yes	Total
Land leased-out ¹³⁴	3	2	5
Petty producers	10	6	16
Small capitalist farmers	3	10	13
Large capitalist farmers	10	49	59
Total	26	67	93

Source: Own household survey 2014-15

The fact that arhtias feel threatened by limits is evident in their determined criticism of banks. In the early 1990s, many new private sector banks were allowed into the banking sector and their permitted scope of work was expanded. Chapter 3 noted how the bank licensing policy was changed to depend more on profitability than on social and developmental goals; this engineered huge competition between the commercial banks, both private and public.

Arhtias argue that banks, especially private banks, give large loans to farmers as part of their aggressive market strategy. Kamal Seth:

Private sector banks compete with each other for market share and give large loans at low rates. The newspapers keep printing that the farmers are in a bad situation because of the arhtias, but actually the private banks are ruining the farmers. The day is not far off when there will be boards of banks on the agricultural land of farmers.

The branch manager of a private sector bank, however, insisted that they are better lenders than public banks whose managers have less discretionary power and lending guidelines prefer farmers that are well-resourced. This private bank, for example, made limits only for landowners with a minimum of 5 acres of owned land. A retired senior official of a public sector bank disagreed, arguing that there is no significant difference between them.

Nevertheless, the point about competition was borne out by my experience. On one of my visits to a survey village on a Sunday, I found employees of a public sector bank conducting a meeting with farmers, trying to persuade them to take loans. The

¹³⁴ Since the land-lease is informal, it is possible for those who lease-out their landholding to obtain credit against their agricultural land, and use it for consumption purposes or as an emergency fund.

private bank mentioned above also admitted that it had goals to increase its business to a certain level within a given timeline.

The criticisms of the KCC by arhtias certainly represent a perceived vulnerability of their historically powerful position. However, there is also some truth to their argument that the KCC has not necessarily been a boon for farmers. This, in my opinion, is less about the increased competition between private and public banks and more about the actual working of the scheme, to which I now turn.

9.3.1 Rotating the Limit

The KCC limit reported by farmers in the survey ranged from Rs 100,000-4,000,000. Table 9.5 shows some examples of limits of farmers with different operational holdings. It is clear from these that many farmers, especially smaller ones, but also large capitalists, would be unable to save such large amounts over the course of six months. Some large farmers said that they do not actually use the limit at all, and a number of small and medium farmers reported that they had no bank limits. Table 9.4 shows that a large majority of farmers (over 70%) had KCC accounts.

Table 9.5: Examples of limits of farmers with different operational holdings

Farmer	Total Operational Holding (acres)	Bank Limit (Rs)
A	1.75	400,000
B	2.5	300,000
C	6	500,000
D	8	1,800,000
E	10	300,000
F	14	400,000
G	19	1,000,000
H	21	1,600,000
I	60	200,000
J	80	3,000,000

Source: Own household survey 2014-15

To prevent defaulting, the arhtia gives the limit amount to the farmer to return to the bank while the farmer pays the interest. The bank gives the limit amount back to the farmer the next day and the farmer returns it to the arhtia. This means that the farmer continues to be indebted to the bank, and unable to repay the money, but does not

default. As the retired bank official quoted above put it, ‘A farmer can, practically speaking, never actually pay the principal and still remain a good borrower if he channels his earnings through the KCC account and pays interest every six months’. This shows how the formal and informal credit systems intertwine in unexpected ways. In this case, formal credit relies on the much-maligned informal credit sources to service its loans.

That the system works in this way also enables the farmers to use the money in quite diverse ways, to, in the words of some arhtias, ‘misuse’ and ‘waste’ it. It is, at least to an extent, in the words of one of the bank officials quoted above, ‘easy cash at low rates’. As one farmer said, ‘For routine expenses, farmers take money from the arhtia. But the limit is used for one-time expenses like buying a vehicle or marriage, etc. Someone in the village has a limit of Rs 1,800,000 and he used this money to buy vehicles when he already has three scooters and motorcycles’. The farmer quoted has an operational holding of 14 acres, and borrowed Rs 1,200,000 for his sister’s marriage. A farmer with an operational holding of 10.5 acres used his limit of Rs 2,000,000 to build a new house. Another who farms over 80 acres of his own has a bank limit of a whopping Rs 30,000,000 which, over the past 15 years, he has used to buy 33 acres of land.

As some farmers may not be able to repay the principal to the bank from their own savings the system, therefore, at least partially relies on the ability of the arhtia to mobilize the limit amount for all his clients (farmers) every six months. Arhtias do this by using their own savings and borrowing from different sources; but they also rely on regular payments and a decent cash flow in the economy in order to be able to do so. So when during the fieldwork year, 2014-15, prices of basmati and potato crashed, wheat yields dropped, and the cash flow was strained, there was a crisis in repayments of bank limits.¹³⁵

Therefore, it is not just small but also some large farmers who are dependent on the arhtias. It is this kind of dependence which prompted one to state, ‘If arhtias are done away with, *kheti khatam ho jayegi* [farming will be over]. The cycle with the arhtias is like an addiction. If arhtias are done away with, our limits will not be complete

¹³⁵ A local newspaper reported that banks in Punjab had started putting photographs of large farmers who had defaulted in their branches and other public places, because of the effect on the individual branches (Sohal 2015).

[i.e. we will default]. Over and above that, day-to-day expenses will not be met by most farmers'. In the same vein, an arhtia said:

We not only get the credit filled up of the farmers, but we take care of them from birth and their entire life, for weddings, illnesses, everything. Bank loans are there but there is a limit to how much banks give. They may lend Rs 2,000,000 but I loan up to Rs 8,000,000. Some even owe me Rs 10,000,000.

All farmers who find themselves in this situation feel the pressure in different ways. It should be noted that all these loans – cooperative, KCC and arhtia – are to be repaid from the income from the same piece of land. The land (or the crops it produces) has to bear the burden of two or three different kinds of credit, even if it is not explicitly the collateral. Some argue that farmers are forced to lease-in land in order to repay the different debts they acquire. One said,

These people [large farmers] have bought tractors worth Rs 700,000 and acquired all the implements. If you buy, you also have to pay interest on that loan and that money has to be earned. People have to farm to make sense of all the implements and machines they have acquired. The other thing is that they have made bank limits of Rs 2,500,000-3,000,000 and if they stop farming on that scale, the arhtia will not lend them money. You cannot do two acres of farming and expect the arhtia to give you Rs 2,000,000.

Another said, 'The only thing with vegetables is that the income is continuous and the household expenses get taken care of. But repayment of loans and interest can only be done with a *badi fasl* [bulk crop].' Badi fasl here refers to crops like wheat, paddy and potato through which a lot of money can be earned at one time; however, this is not guaranteed. As I pointed out in the earlier chapters, land, capital investment and market dynamics interact in complex ways to determine what profits may be earned from this.

9.4 Conclusion

This chapter has brought out the complexity of agricultural credit for farmers, the roles played by different credit institutions and actors, and the ways in which farmers navigate them. Informal credit, from arhtias, has commonly been vilified as exploitative, and rightly so. However, in the absence of adequate alternatives and as the bankers of last resort, they play an important role in keeping the agricultural economy afloat. The ways in which they finance their moneylending operations,

especially through dasti, means that a large part of the credit economy and the wider agricultural economy depends on smooth cash flow to and from the arhtias. Their power continues due to the need of the farmers and assured government procurement of wheat and paddy. However, as competition increases among arhtias and with the reconfiguration of formal agricultural credit, they, too, are feeling the heat. They have even started accepting finance from large capitalist farmers, although that is also a statement of the growing power of some of the latter.

Chapter 10. Beyond Farming

This chapter focuses on accumulation by capitalist farmers outside farming. It attempts to draw out diversification trends among farmers and reflects on what matters for different kinds of diversification.

Most farmers agree that farming is no longer as productive or profitable as it was until the 1980s. This makes venturing into a ‘side-business’ or other economic activity important, although it is commonly argued that only a small proportion of farmers have achieved success in another line of work. For some farmers, this success may lead them to leasing-out their land entirely. In the survey, around 63% of all households (over 50% of the large and small capitalists and over 80% of petty producers) reported that they had a source of income other than farming (Table 10.1). It is notable that a majority of farmers across different classes have another source of income. The relative proportion of diversified households is much higher in the case of petty producers than in the other classes. This suggests that they have a greater need to diversify than other classes. For the latter, especially the large capitalists, diversification would be linked less to the need to survive and more to the desire to expand their base for accumulation.

Table 10.1: Number of households with some form of diversification

	No	Yes (% of total)	Total
Land leased-out	0	5 (100)	5
Petty producer	3	13 (81)	16
Small capitalist	4	9 (69)	13
Large capitalist	27	32 (54)	59
Total	34	59 (63)	93

Source: Own household survey 2014-15

This diversification includes many different kinds of economic activity – businesses¹³⁶, services, jobs, and migration. Not all are equally accessible and/or remunerative, and the success varies across households and classes. In what follows,

¹³⁶ ‘Business’ refers to an enterprise owned and operated by the farmer with the aim of realizing a sustained income.

different kinds of diversification strategies are described and some cross-cutting themes discussed.

This chapter could not be very in-depth due to the methodological challenges discussed earlier. It describes the different areas of diversification, the conditions that allow for such diversification, and the factors that may lead to its success and failure. It is not able to establish the exact capital invested by households or the returns to investment from different kinds of non-farm activities. Therefore, the classification of types of diversification is made on a general assessment of the levels of investments required and the potential income to be derived from each source.

10.1 Agriculture-Based Business

This section discusses businesses that are related to agriculture, capital-intensive and accessible most easily to large capitalist farmers (although there are exceptions among smaller farmers). This is the most common type of business set up by the Jats.

10.1.1 Arht Business

Within agriculture-related businesses, the most common is the arht business. At least half, if not more, arhtia shops in the grain mandi are now owned by Jat landowners/farmers.¹³⁷ This is a huge shift given the historical domination of the Mahajan castes in this business. The trend started in the 1980s and gained momentum in the 2000s. Many respondents argued that the boom in land prices (see Section 8.3) enabled many Jats to set up their businesses by selling small portions of their land. Other Jat arhtias used savings from (large-scale) agriculture, partnerships with friends or family members (commonly splitting up after some years), and/or by moving from one business to another. But while the Mahajan castes have lost monopoly over this business, arhtias as a whole have continued to retain their importance in Punjab's agrarian landscape, as discussed in Chapters 7 and 9.

Nevertheless, Mahajans feel threatened by Jat arhtias, manifested most clearly in statements alluding to the particular temperament of Jats, their '*Jatt buddhi*' which,

¹³⁷ A relatively new part of the main grain mandi is called Sardar Mandi. Sardar is the word for male Sikhs, and this yard has been termed as such as many of the newer Jat Sikh arhtias have been allotted shops in that yard.

the Mahajans claim, makes them unsuitable to do business. Kamal Seth once remarked, quite bitterly,

The food grain business is the kind of business where one can never know who is in what condition; you can never know whether there is any money in that locker or not. ... This is the kind of business that a decision I make now may prove to be wrong in two hours' time. Jats think it is only about money in and money out. But it also requires a lot of diplomacy.

Mahajans argue that Jat arhtias lend too much and, along with private banks, they have caused excessive indebtedness of farmers; many farmers concur, though not all. It is also argued that Jat arhtias have an interest in over-lending since they can then lay claim to the farmer's land. One farmer explained:

Earlier, Mahajans used to come to see the fields of the farmers and check what the farmers were growing. They would lend the money accordingly. The thinking of the Jat arhtias is that if we give more credit to the weak farmer, then we can take control of his land once he cannot repay.

Jat arhtias, unsurprisingly, disagree with this assessment; they say it is obvious that Jats would have come into this business, one insisting, 'This is our line. This is agriculture. We know it'.

While the interest in land may be true of some Jats, though I have no evidence of the same, the real issue is of competition in the mandi.¹³⁸ Jats who establish their arht businesses gather clients from among their relatives, friends and neighbours. Needless to say, they have large networks of farmers they can tap into to expand their business. Some farmers indicated that their arhtia was a relative or a neighbour, or told how they changed from their Mahajan to a Jat arhtia due to a disagreement with the former. Mahajan arhtias, of course, also have a historical base among farmers, but with Jats coming into the business, they face stiff competition. As a farmer-cum-inputs dealer said,

In any business, if the market is the same but the shops increase, there is bound to be competition. Otherwise, the Mahajan arhtias behave like Mahajans but the Jat arhtias also function like Mahajans. The

¹³⁸ Competition between merchants-moneylenders determining market dynamics has also been pointed out by Olsen (1996). She argues that such competition is one of the main reasons why merchants do not foreclose against farmer's unpaid loans as it would imply losing the farmer's business.

thing about advances is just that the Mahajan will think ‘Oh, what if my advance gets ‘stuck?’’ but the Jat will think *danda maar ke nikalwa lenge* [we will use force to get the money back].

Jaspal Singh also pointed out that Jat arhtias have an advantage in terms of capital:

It is true that Jats lend more money. Jats are more big-hearted. But the thing is that we also *have* more money. Even if I do not do this business, I get Rs 2,500,000 from the paddy I produce on my farm. That becomes my limit to lend. Even if I do not do anything with that money, I still have that income. The Mahajans do not have this, so they resent us. But they can manipulate numbers to make a profit.

Despite the odd loss-making firm, the fact that it is a profitable business is undoubtable. Sharmaji, the accountant quoted earlier, explained:

Even the smallest arhtia, who only gets 2,500-5,000 bags of wheat and paddy and does not have any employees, will have a profit of Rs 150,000 in a year. The biggest ones, who get 100,000 bags of paddy and 30,000-32,000 bags of wheat, will earn at least Rs 2,000,000 per annum. If you take Rs 300,000 to be their expenses on employees, they will earn Rs 1,700,000 in a year.

By this account, even a small arhtia’s income is more than that of a small farmer cultivating only wheat and paddy.

Some of these Jat arhtias, like the Mahajan arhtias, have become pucca arhtias for basmati. The pucca arhtias for some of the largest basmati purchasers in the mandi were Jats. However, it is a difficult and risky business. Technically, all arhtias are licensed to do the work of a pucca arhtia or other kinds of trading in food grains. Kamal Seth who also trades in some food grains said, ‘the trading license for sale of wheat/paddy and purchase of soybean is the same. It is not kacha or pucca. It is *purchase ka kaam* [purchase work]. It requires knowledge. To get this knowledge, one has to move around in the market.’ However, many choose not to do it while others do not have the knowledge or capital required. Jaspal Singh, for example, told me that he does not want to become a pucca arhtia because ‘what if it sinks *this* business [kacha arht] along with itself? What if the payment stops? Then what will happen?’ There is also the issue of the scale of investment such activities require. As per one estimate, starting work as a trader requires an investment of at least Rs 10,000,000.

Compared with the grain mandi, Jat arhtias are not as numerous in the vegetable mandi. Only 4 or 5 of around 50 arhtias are Jats. Business in the grain mandi is secure due to government support, a major incentive for farmers to join the grain arht business. This is not the case for the vegetable mandi, where there is a lot more risk. As an official of the Market Committee said, ‘In the grain mandi, the government is the trader; here the traders are different. In the grain mandi, purchases are made by wholesalers; in the sabzi mandi, purchases are made by the retailers. *Yeh Jatton wala kaam nahin hai* [this is not work that can be done by Jats].’

However, it is not only about acumen and risk; it is also about networks. Chapter 6 discussed the fact that the majority of arhtia shops specialised in either fruit or vegetables, but very few sold both. It is telling then that, with one exception, the few Jat arhtias in this mandi all trade in vegetables. The same official stated, ‘Fruit comes from Delhi and they [Jats] have not developed these networks. There is one Jat who has started dealing in fruit but he is very new in the mandi’.¹³⁹ The Jat arhtias in the sabzi mandi are themselves vegetable farmers; they have the experience and the networks – with farmers and traders even in other cities – to develop this business.

10.1.2 Input Suppliers

A related business is that of seeds and chemicals input dealerships. Some arhtias also have input shops but it is not very common. Jaspal Singh is one such farmer-cum-arhtia whose input shop in the mandi is managed by his son. I came across two others farmers, one included in the survey, who had input shops in their villages. One of them took out a bank limit to start the shop.

As in the arht business, maintaining relations with farmers is crucial. Moreover, because farmers look to these dealers for advice on which and how much seeds and chemicals to use, having know-how is essential for success. However, the amount of profit earned also depends on how chemicals are priced. Gurjeet Singh, a large cauliflower capitalist who also owns an inputs shop: ‘We get up to 10% margin from the Indian companies and only 1-5% in the case of the TNCs but we have to sell what the farmers demand. Both work equally well but we get less margin from TNCs.’ Another respondent explained,

¹³⁹ Interestingly, it was a Bihari trio, former petty vendors that managed to break the monopoly of the ‘Bahawalpurias’ in the fruit trade in Khanna mandi.

There is a lot of margin in chemicals – ‘*ola*’ or ‘back’ profits are high, like in garments. This sodic oil has a profit of Rs 30 per bag; there are some chemicals where the profit is only Re 1 and some where the profit is Rs 200. There is also one chemical which is produced by different companies at different prices – Rs 200, Rs 300 and Rs 625. Farmers buy according to what they can afford; but even if things are expensive, if the chemical is effective, then the farmer has no choice but to buy it.

10.1.3 Mills

For the Jats who have capacity to set up industries, rice mills are the most attractive option. Kaur et al. (2007) argue that deregulation of the rice mill sector and credit reforms incentivized investments in rice mills in Punjab. During 2014-15, Khanna had 55 rice mills, of which 11 were owned by Jats (one in partnership with a Mahajan). As per one estimate, it would cost at least Rs 15,000,000-20,000,000 to set up a rice mill that can process government quality paddy.¹⁴⁰ All mills, old and new, now have a sortex machine for sorting grains whose shell has been removed; these cost anywhere between Rs 2,000,000-5,000,000.

Even though rice mills are not subject to the reoccurring expense of raw materials purchasing (see Section 7.1), this is a large investment that is inaccessible to even many well-off farmers and established arhtias. In addition, due to the mismatch between government specifications and current average crop quality, mills have to spend time, energy and resources in producing, and sometimes buying in, rice that meets the government’s standards. Jaspal Singh said it was ‘*jhanjhat wala kaam*’ [hassling work]. Ashok Bahl, a Mahajan broker-cum-rice mill owner, explained how he had suffered a large loss in his mill business, and it is a misconception that rice mills are always profitable.

Despite the hassles and the odd case of major losses, the fact that new mills are being set up almost every year indicates that there are large profits to be made. Sharmaji emphasized this:

Shellers have had no major losses in this area in the last two to three years. If they cannot make a profit, why do they lease the mill for Rs 1,400,000?! The rate of bran in the market right now is Rs 1,350 per quintal, and the rate of paddy was also Rs 1,350 – naturally they make

¹⁴⁰ One estimate for the initial investment for establishing a basmati mill was Rs 500,000,000. This includes the costs of the physical infrastructure and raw material stock.

a profit. Shellers are left with the entire by-product of paddy – how can they be loss-making?

Indeed, through my fieldwork I gathered that at least four mills had been leased-out during 2014-15. The annual cost for a one tonne mill was Rs 1,200,000-1,900,000; for a two tonne mill it was Rs 1,800,000-2,000,000.¹⁴¹

Flour mills are generally accepted to be more expensive to establish (although I was not able to obtain an estimate) as the owner also has to incur the cost of stocking the raw material. Of the seven flour mills in Khanna, only one is owned by a Jat, and it is leased-out to another trader. The lease rate of these mills is also much higher at around Rs 2,500,000-3,000,000 p.a.

Jats are similarly under-represented in other kinds of mills in Khanna. There are four 'solvex' plants (for oil extraction from food grains and their by-products) in Khanna, none of which are Jat-owned. Similarly, of the roughly 30 or so feed mills, very few are said to be Jat-owned. Overall, therefore, Mahajans have been more successful in diversifying from trading-moneylending to setting up industrial units than Jats, especially beyond rice mills.¹⁴² This supports the arguments made by Damodaran (2008), discussed in Chapter 3.

10.1.4 Potato Trade

Section 7.3 examined those farmers who had entered into potato trading. Here, some examples and illustrations of how diversification into this business came about are given.

Contract farming in the Amloh area was promoted by the agribusiness companies through a joint family of five brothers (the Gill brothers).¹⁴³ The Gills had a large landholding and had started growing potatoes on a small scale in the early 1990s. Their initial association was with PepsiCo but eventually they expanded their range of work considerably. The five brothers now conduct their businesses separately, with three of them having their own cold stores. It is common practice for contract farming companies to rent all or part of the cold stores in areas where they have

¹⁴¹ Jat farmers were not the primary lessees of such mills and therefore, studying the asset prices and operating costs of these mills was considered of less interest here. Lease rates are given as an approximate indicator of the potential profitability of rice mills.

¹⁴² Diversification strategies of Mahajans were not studied systematically.

¹⁴³ I conducted separate interviews with two brothers; Jagjit Gill, quoted in previous chapters, was one of them.

contract farming operations in order to store their seeds. Two of the brothers have rented out their stores to two different companies while one operates his independently.¹⁴⁴ They also have other businesses among them including arht and input dealership. These businesses are in addition to an average of 100 acres being cultivated by each brother. At least two of them also have land in other parts of the state and/or urban property. The case of these brothers shows the role of the family in enabling successful diversification.

As in the case of potato production, the establishment of new cold stores under liberalisation was driven by the demand generated by contract farming and seed companies. They were set up with subsidies extended to farmers under the National Horticultural Mission. Notably, most of the new cold stores were built by large farmers and not traders. The phenomenal increase in the price of land in recent years (Chapter 8) has made land unaffordable even for established traders. According to an employee of PepsiCo who works at one of the rented cold stores, ‘To make a cold store for 100,000 bags, it costs Rs 30,000,000. The government gives a Rs 10,000,000-2,500,000 subsidy. PepsiCo pays Rs 1/1.5 per kg (Rs 50-75 per bag) while the regular stores were charging Rs 90 per bag’.¹⁴⁵ One cold store owner who rents out half the storage space to a company said that it would be more profitable to run the store without renting to the big companies, but the guaranteed rent works as a security. He explained:

It is like insurance; we have taken loans to build the cold stores; this store has a capacity of 100,000 bags and the loan repayment interest comes to Rs 6,500,000. If we rent it out at least 50% of this instalment gets insured; the rest we can pay on our own. For the years when potato production is lower, we are insured for that much money.

As in contract farming, corporates here are both exploiters, paying less than market rates, and enablers, providing security to an upcoming business.

Many of the new cold store owners also have seed farms and are engaged in potato, specifically seed potato, trading (see Section 7.3). This is the most capital-intensive

¹⁴⁴ This brother also rented his cold store to PepsiCo until 2014.

¹⁴⁵ Another cold store owner explained, ‘The National Horticultural Mission gives subsidies under certain conditions, like x area should be buildings, x should be coverage, etc. In category 1 – where the capacity is 250mt – they give 35% of Rs 50 million; in category 2 – the capacity of 1250mt, there are four chambers of 250mt each; here the subsidy is 35% of Rs 40 million per chamber; even in category 2, subsidies for panel-storage (like this one) and brick stores are different.’

diversification portfolio within the potato trade. At a relatively lower level of investment, some farmers in villages near Paunpura engage in trading only. These table potato farmers-cum-traders connect other farmers with arhtias in various mandis and take a commission, although they are not licensed. In order to lock-in the supply, they also sometimes purchase the produce at their own expense, selling on to the arhtias when prices are higher or when demand rises. Thus they might be working sometimes as traders and/or what is known as ‘stockists’, a euphemism for hoarders. Typically, this also involves training with a more experienced person for a few years.

One such farmer-cum-trader explained:

In 2009, when I was training, the commission was Rs 5 per bag. Now the commission has increased to Rs 10 per bag. But there is also risk. If the market goes down, like it is now, the traders at the other end may reject the stock on flimsy grounds. They can become *be-imaan* [dishonest]. Rejected stock can lead to losses worth Rs 100,000 even.

[So this commission work is actually also like being a type of trader?]

Yes. A lot of times we actually make payments to the farmer and then sell the stock on.

Expanding the scope of this work requires deep pockets, networking with traders and the possibility of both big profit and big loss, an option available to only a handful of farmers. Overall, in different kinds of potato trading, the nature of the market for the crop itself is crucial for diversification.

10.1.5 Dairy Farming

Almost all farmers and landowners, including those who have leased-out their land keep some cattle (*dangad*). Any milk remaining after household needs is sold on a daily basis to the village-level milk cooperatives (run by Verka in this part of Punjab) or private dairies, run usually by another farmer/landowner. The money from this is used for daily household expenses. Some farmers also do dairy farming on a much larger scale. These dairy farms can have anywhere between 15-50 animals,¹⁴⁶ and constitute a business enterprise in themselves.

The price of an animal depends on the quality, species and breed, and ranges between Rs 20,000-100,000. Most farmers, however, do not regularly purchase new

¹⁴⁶ At any given point of time, some of these animals will be calves (*katti*) and some will be pregnant.

animals but breed their own. Prices depend on the fat content of the milk: buffalo milk can fetch Rs 40-45 per litre and cow's milk Rs 20-25 per litre. The average milk yields are 10 and 30 litres per day, respectively; the average daily income from one buffalo is Rs 400-450 and from one cow Rs 600-650. Despite the difference, buffaloes are preferred to cows since the former's milk is preferred for self-consumption and they are lower maintenance. The survey included one large farmer who also owned a dairy farm with 25 buffaloes who sold about 45 litres of milk a day, producing a daily income of at least Rs 1,800. A small farmer with 2 acres of land cultivated only fodder and had a dairy farm of 20 cows: he sold 60-70 litres per day at Rs 25; his estimated daily earning would be Rs 1500-1,750.

This indicates that there is scope for profit in this business but I also heard from some farmers that they had suffered major losses in this business and abandoned it. Ranjit Singh, a young farmer from a large capitalist household told me:

Eleven years ago, we started doing dairy farming. We had 15 buffaloes and a dairy in the city. But we sold everything. The feed became very expensive. Nobody grows feed here at home – who grows *makki* [maize], *bajra*, *chaara* [fodder], etc. here? Dairy had picked up about a decade ago and did well for four to five years, but that did not continue.

Those running successful dairy farms claim that people fail because they do not put in their own labour, and employ workers for everything. A single *naukar* employed to look after cattle can cost Rs 3000-7000 per month plus food; a casual labourer's wage is Rs 300 per day. Whatever the reasons, the fact remains that dairy farms have not taken off as a hugely successful and popular diversification option for farmers.¹⁴⁷

10.1.6 Combines

Some large farmers also own combine harvesters that are rented out during the harvest season. It may be rented out in its home and neighbouring villages, other parts of the state, or even other states such as UP. At the beginning of the wheat harvest in the north-western belt of India, it is common to see many combines being driven along the highway. I came across three farmers who owned combines, one of whom had two combines permanently stationed in a village in UP.

¹⁴⁷ Cooperatives, like Verka, which are crucial to dairy-based income, are also under strain under liberalisation (Ramdas et al. 2016).

A combine costs around Rs 1,500,000. Chapters 7.1 and 7.2 noted that harvesting paddy and wheat by combine costs Rs 2,000 per acre. One of my survey respondents, Rajdeep Singh, a small capitalist farmer, explained how he once spent a week in a village near Yamuna helping his uncle's son with the combine they operate there. He said,

There is a total income of Rs 300,000 including costs; if one includes costs – driver (Rs 20,000), helper (Rs 12,000), diesel (Rs 110,000-115,000), and any maintenance expenses – the actual profit in one season is not more than Rs 70,000-100,000. That way combine owners earn a big amount at once.

However, some farmers argue that there are too many combines in the state now and it is no longer remunerative. One farmer stopped renting out his combine because he thought it was not worth it given the costs. Rajdeep Singh went on:

The wheat grown in our village, for example, has gone down from 400 acres to 60 acres [due to the increase in potato production]. And where there were only 10-20 combines in the entire state in the 1980s, now there are hundreds of thousands. The company Kartar sells 60,000 combines every season – imagine how many combines there are!

10.2 Non-Agricultural Business

Transport, especially truck transport, is said to have been among the first non-agricultural businesses that Jat farmers from Punjab diversified into. One farmer-cum-input supplier even claimed that 'at one point 50% of truck transport in India was owned by farmers here'. I met five farmers (three part of the household survey) who were involved in this business at the time of fieldwork or earlier – one had moved to Madhya Pradesh in 1981 to learn how to drive from a relative who had a truck business there while another owned and operated two buses between Khanna and Morinda.

It is argued that this was a huge success until 15-20 years ago, but has now fizzled out. Some disruption was caused during and in the aftermath of the anti-Sikh riots across north India in the mid-1980s. One farmer who used to have a transport business explained,

I had a truck business for 10 years. But I had to sell everything three or four years ago. I made a loss because the diesel expenditure and the toll tax were too high. You see, usually one is able to get goods worth

of Rs 100,000 for one side [of the travel]. But we spend about Rs 30,000 on diesel; then the toll taxes one way comes to Rs 6,000-7,000; then there are other types of expenditure, like maintenance. The total profit was reduced to Rs 10,000-20,000 and that is not enough. If I had made Rs 50,000, then it would be different.

This farmer has returned to farming only; he has 2.5 acres of his own and was leasing-in 13 acres at the time of the interview.

Tractor dealerships are another kind of diversification; during fieldwork, three farmers said they were involved in this business, one of whom was also an arhtia. Two had established their businesses in partnership with relatives or friends, and one had invested in someone else's dealership for some time (as well as his own). The latter is Amandeep Singh, the large cauliflower farmer mentioned in previous chapters. He argued that tractor dealerships were no longer as profitable as they used to be:

I have had a tractor agency since 2006; the money in the business depends on how much you can save – the companies sell the tractor to the agency and then we can negotiate a price with farmers which is Rs 5000-10,000 more than our purchase price. Sometimes one has to sell them at a loss as well. Before 2000, all companies worked on a commission basis but now that has changed. [Jokingly] This job is simply about wearing good clothes and sitting in the shop. I used to have employees but they ran away, and since there has not been a lot of new work, I have not employed anyone else. I have just kept an old man from the village to guard the shop when I am not there.

Some large farmers have also set up private schools and, more rarely, colleges. Jaspal Singh's daughter, for example, married into a family that owns a private, 'English-medium' school in their village. His daughter and son-in-law both teach in the school. Harman Singh described this phenomenon:

There are many private English-medium schools around here. These schools are mostly 10-15 years old and were opened by farmers who have some education but did not get a job; but they have some money. They open a school and employ five or six girls like you as teachers. They induct three-year-old children and keep them for three years until 1st standard age and make money.

Another capital-intensive business is setting up 'marriage palaces', or banquet halls for weddings or other social functions. Jaspal Singh's son and nephews want to open a palace but he and his brothers are not keen. He told me, 'One needs at least two acres for a palace plus at least Rs 10,000,000 on construction; this means in Khanna

we are looking at a minimum of Rs 20,000,000 investment'. While nobody in the household survey owned one, there were many marriage palaces around Khanna (and everywhere else I travelled in Punjab), many of which were said to have been established over the past twenty years or so by rich farmers. A prominent Jat arhtia, for example, owns an expensive establishment near Khanna.

Finally, a kind of non-agricultural work that became more popular in the years when land prices spiked is property dealership, though it existed before that as well. Since many of the transactions are done on the 'black market', little was disclosed by the two survey respondents who claimed to be involved with this.

10.3 Education-Based Diversification

Education has been yet another way in which farmers have diversified. In the survey, 26 households reported at least one member who was in salaried employment during fieldwork or earlier. The types of this employment, however, varied considerably. Within this, 16 households reported government jobs held (including military service) while 13 households reported private jobs. Note that some of the households had both which is why the numbers do not add up to 26.

Punjabis, especially Jat Sikhs, have a long history of military service (see Chapter 4). Most are employed as soldiers, while a fewer number are officers. Both are considered honourable careers, not least because of the starting salary of Rs 22,000 per month. Some survey respondents were pensioners receiving a military pension of a minimum of Rs 12,000 per month. Non-military government service involved employment as *patwaris* and *kanungos* (revenue and land records officers at the block or district level) and government school teachers. These jobs also pay at least Rs 30,000-40,000 per month.

Of the private jobs reported, eight households across different classes had members employed in relatively well-paying positions. Some were accountants or supervisors at the factories in and around Khanna. Others included women of the household, including daughters-in-law, who worked as teachers in private schools or colleges. Three households, all petty producers, in the survey reported that a member of the household did a labouring job, as a worker in a factory (Rs 4,000-7,000 per month), a mechanic (Rs 10,000 per month) and a driver for a rice mill (Rs 7,000 per month, only for six months a year).

One large farmer, Narinder Bajwa, had retired from the military; his three brothers were also either in or retired from government service. Their children were also in respectable salaried employment. He said:

People are often surprised about how uneducated parents could teach us so much that we all got government jobs. But they did. We have built these houses, educated our children. This would not have been possible for someone only farming over four acres. This was possible because of our jobs.

He now leases-in his brothers' share of land as well and cultivates a total of 24 acres.

However, education diversification is not only for large farmers; smaller farmers also follow this path. An uneducated small farmer sharing four acres with two brothers claimed that he manages well because his two brothers had the opportunity to study and gain jobs. Through farming and help from his brothers, this farmer educated his two sons in government schools and colleges, eventually becoming engineers who work in corporate firms in Ludhiana and Chandigarh, respectively.

10.3.1 Skills-Based Businesses/Jobs

Those who cannot afford the education that would lead to good, salaried jobs encourage other kinds of skill-based training. Harman Singh, a small capitalist farmer quoted several times earlier, funded a laboratory course for his son (he did a BA from a government college but did not get a job). Now the son runs a small laboratory in a village where he conducts health-related tests. Training as a mechanic is another skill that young men from these households learn. Two sons of a petty producer work as mechanics. One works for a company in Gujarat that pays him Rs 10,000 per month and the other has a mechanic-cum-spare parts shop in Khanna that employs three or four people. This farmer claimed that 'there is no fixed income [in the shop]. Sometimes there is more; sometimes there are losses'. Similarly, two brothers in a joint small capitalist household run an electrical works shop in the village, while another petty producer owned a shuttering business (earning Rs 7,000-8,000 per month). While I do not have evidence of the same, it would be reasonable to assume that they would have had some prior training in these works.

Much of the above would qualify as 'petty businesses'. Petty business here includes small shops or services that involve limited investment and generate limited income. In the survey, only one farmer among the petty producers was involved in the kind

of big businesses described earlier. Of the 59 large farmers included in this survey, 15 were involved in such a business either at the time of fieldwork or at some point earlier. In contrast, six farmers with smaller operational holdings and three large farmers were involved in petty businesses.¹⁴⁸ Even outside the survey, I met farmers who made a small income from shops such as these.

In terms of skill-based services, two tractor-owning farmers (one with six acres and one with four) in one of the villages did ‘*bahai*’ or preparation of land before crop sowing for petty producers. While *bahai* is something that all farmers know how to do, the point here is that these farmers used these skills (and their tractors) to generate some additional income.¹⁴⁹ They charged Rs 2,500 per acre, but it was not possible to estimate how much they would earn in one season. The one non-Jat landowner in my sample worked as a carpenter (also his caste) and earned about Rs 7,000 per month on average.

10.4 Migration

Jat farmers in Punjab have had a long history of migration to ‘the West’, especially the USA, Canada and the UK. This is particularly the case in the Doaba region (see Chapter 8). In the Malwa region, it has been less prominent historically, but gained momentum because of the widespread everyday violence of the 1980s disturbances. With many experiencing declining fortunes in agriculture, even in Khanna which is one of the most prosperous areas in Punjab, migrating to settle abroad is a goal that many aspire to and work towards.¹⁵⁰ ‘*Baaharle desh*’ or foreign, especially Western, countries are imagined as the key to a better life, and there is more than one route to this. In the survey, a total of 18 households reported that a member of their family had migrated (9), failed in their attempt at migration (4), or abandoned the attempt (5). In interviews with farmers who were not part of the survey, many also shared stories of family members who had migrated to another country.

¹⁴⁸ Other kinds of non-agricultural petty businesses were also reported, which were not skills-based per se. The son of a large capitalist farmer owns a garment shop in Khanna town which, he said, brought in Rs 4,000-6,000 per month. Another household in the same class category had a grocery shop in the village. This suggests that large farmers also invest in these businesses, although as a supplementary income source and not as a means of moving out of agriculture.

¹⁴⁹ This is not classified as an agriculture-based business in Section 10.1 as that only covered strategies involving high capital investments and with potentially high returns.

¹⁵⁰ This is true not only of Jat farmers, but also of Dalits and, to a lesser extent, of Mahajans.

10.4.1 *Stories of Success*

A major factor in successful migration to another country involves access to networks that can help in both migration and settling down. Maninder Singh who leases-out his land and has been a resident of the US for over 30 years told me:

I left for the US mainly due to terrorism. After that I took many others along; I took about 83 members of my family abroad. I have taken another 2,000 people also – there were times when entire flights were full of people going from here to Canada or the US. If you are not into crimes, they will not give you any problem.

While it is no longer as easy to migrate to other countries, this quote shows how individuals can enable others to migrate successfully. In a joint farming household of five brothers, for example, eight family members had migrated to the USA or Canada. Another young farmer said, ‘My papers are being processed for going abroad. I will go for farming. My *mama* [maternal uncle] has land in Roma, near the airport. We have also put money in it. We have had that land for 10-12 years’.

Farmers, or their sons, also migrate through marriage with a woman who is a resident of another country. In some cases, the marriage is solely for the purpose of migration and once the farmer receives citizenship, the couple gets divorced. This is not always considered respectable but is accepted nevertheless.

Successful migrants do different kinds of work in their new places of residence. Several respondents, especially members of large capitalist households, had their own businesses in these countries, such as transport, wood works, construction contractor, liquor shops and grocery stores. Many also drive their own taxis or trucks. As the quote above indicates, they may also continue to farm; agricultural areas in Rome and Brescia in Italy, for example, are known to rely heavily on the labour of Punjabi migrants. Only very few Jat farmers own any land in these countries, and many of them, including some from large capitalist backgrounds, work as labourers on farms. Some also do labouring jobs in industries.

Some survey respondents disclosed the fact that they receive remittances from the family members who had migrated and although they mentioned it was occasional, they did not give an amount. One large capitalist farmer, both of whose brothers had migrated said that the remittances were occasional because ‘what will a daily wage earner send?’ Nevertheless, remittances are considered legitimate and important as

the migrant member also has a share in the land and status of his family in the village. Many who are abroad seek marriage alliances for their children in Punjab, and in such situations, both their profile in the other country and their status locally is considered important.

There were also a number of respondents who asserted that they never received money from their migrated relatives. One large farmer, both of whose sons have successfully migrated to the US said,

We do not need it [the money]. In general, they want to invest in land but I tell them that they should invest in expanding their business in the US only. They are not here and in their absence, there can be disputes and it can be a risky investment.

Indeed, investments in land and building houses are among the most preferred ways of re-investing. Maninder Singh, for instance, explained how he had bought 5 acres 20 years ago using his earnings in the US. Further, he and his brother (also in the US) both built separate houses in the village.

10.4.2 Disappointment in Migration

Not all experiences of migration are pleasant or successful.¹⁵¹ Nevertheless, greener pastures continue to be sought. For those without personal networks enabling migration, ‘visa agents’ are employed. These are private firms in the business of enabling locals to migrate abroad. However, the kinds of jobs arranged by agents are not always satisfactory and many spoke of frauds committed by such agents.

Harman Singh trained his younger son to drive a construction machine and an agent found him a job in Dubai. The farmer’s wife, however, lamented:

We have been trying to find a good agent for our son. He is a JCB driver in Dubai. The agent took Rs 300,000. But he finds the work very hard and they do not give leave. They will give him a driving license in one year, then he will get to drive a truck and that will make it easier. He has to buy everything from the market – here we have everything.

Another small capitalist farmer told me:

I sent my son to Italy but the agent did not find any work for him and so he returned. Earlier, I had sent him to Kenya but to get a job there,

¹⁵¹ There were also some cases where the brother or son who migrated simply disappeared and there had been no contact for several years.

one had to pay Rs 5,000,000 which I did not have. So he had to come back from there also.

Others were disappointed and returned home not due to problems with their agent but because their own expectations were not met. Rajdeep Singh, the young small capitalist farmer who worked on a combine had also worked as a driver in Dubai for four or five years; he returned as he thought neither the pay nor the life was good there. Since then, however, he has continued to try to migrate elsewhere. He took the risk of going to Mexico without a visa and was deported at the airport. He is now trying to go to the USA with the help of someone in his village.

Sunny, the young, cauliflower-growing large capitalist farmer oft-mentioned earlier, had worked in a factory in Venice for a time, but he decided the pay was too low and returned. Others in the village point to how he wasted money, but given his earnings from cauliflower production, his decision seems logical. His experience in Italy has not put him off: he is now trying to migrate to Canada.

I have put in an application for PR [Permanent Residency] for Canada [he said]. My friend left last week. I have also applied; it will take three to four years. The investment is Rs 10,000,000 but we will get PR. The government in Canada wants us to invest and settle there.

[But why do you want to go there? Your farming is going so well here.]

It is going well, but I have to manage 70 labourers on a daily basis. It is too much hassle.¹⁵²

This shows that it is not just migration but migration of a certain kind that is aspired to. Admittedly, there are a few who returned and do not wish to go again. One such small capitalist farmer returned after a personal tragedy where he lost his wife while he was working in Italy as a dairy farmer. He said, 'There is nothing abroad – one is simply a servant of the owner; one minute they would be smiling and another minute they would tell you to leave.' This feeling of working *under* someone else is found degrading by the reasonably well-off Jats. Therefore, it may be argued that households aspire ideally to a kind of migration where they can have a business of their own, whether large or small. But that requires investment and networks of a kind not available to everyone.

¹⁵² Karnail Singh also tried to send his son to Canada through this route and made a KCC account of Rs 1,600,000 to fund the application cost. His application was, however, rejected and they were considering re-applying.

10.4.3 'Study Basis'

I mentioned above that it has become more difficult over the years to migrate successfully to Western countries. Over the past decade or so, a new route for migration has emerged, migration through 'study basis'. 'Study basis' is shorthand for when migration takes place by obtaining a study visa to a country and the person(s) stays on by finding employment there. Every city I visited in Punjab during my fieldwork, even the highway, was brimming with hoardings advertising coaching for IELTS classes and study visa agents. Several respondents, especially younger people, both within and outside the survey sample, reported that they were trying to get a study visa.

The young farmer quoted above who owns some land in Rome, for example, also said he would migrate using this route. He said, 'I will go on study basis but once I go there, I will do farming. The paperwork is needed here, but when you go there everything is taken care of'. The following is an excerpt from an interview with Ranjit Singh and his mother:

Mother: He is getting married on January 25th. His wife is taking the IELTS exam. If she clears it, then both of them will go abroad. If her score-band is 7, then they can go to Canada. If it is less, then they will go to a smaller country, like Australia. Her parents have given Rs 13,000 as the tuition fees for the coaching.

Ranjit: The total package of going abroad costs Rs 1,500,000, including spouse. Her tuition fee is Rs 1,100,000. Then one has to carry some cash also. They must be charging Rs 50,000 or Rs 100,000 as cash.

[Will you study there too?]

Ranjit: No, I will not study there. She will study, I will work.

Mother: What do sons of Jats do? He will drive a trolley. Some of his friends do that there.

I came across a few other cases where the wives of the young farmers were studying for IELTS and the farmer-husband planned to migrate through her. This could partly explain why young girls in the family were usually more educated than the young men; it is potentially a way of finding a suitable match for daughters and socio-economic mobility for the family. The above conversation also shows how expensive going abroad on 'study basis' can be. Again, this is something that is inaccessible to poorer farmers.

10.5 Notes on Politics

Before moving on to a discussion of wider trends, I would like to reflect on some important observations on the role of politics in enabling diversification of different kinds.¹⁵³ In the survey sample, at least 12 large capitalists and 2 landowners (with 13 and 7.5 acres each) who had leased-out their land either had a political position in the village or were associated with one or the other political party factions.¹⁵⁴

Not surprisingly, many of the large farmers who had diversified into major businesses were also affiliated with a political party (either SAD or Congress), or closely aligned with someone politically powerful in the village. In the grain mandi, too, Jat arhtias had strong political affiliations (referred to in Chapters 7.1 and 7.2 discussing the arhtias' protests). In fact, the two presidents of the Arhtia Association (the incumbent changed during fieldwork) were both Jat farmers, as were some other office-holding members. One of the arhtia shops in the mandi is, in fact, in partnership with the leader of one of the BKU factions. The president of the Punjab Rice Millers Association is also a Jat.

Given the literature discussed in Chapters 3 and 4, it would only be reasonable to expect that political affiliations or alignment play an important role in accumulation by such farmers, either by accessing networks, mobilising resources or avoiding legal problems.¹⁵⁵ For example, Rajdeep Singh, a small capitalist farmer said, 'The big people do not let subsidies reach the small farmers. People with connections, they take everything... Narinder Bajwa and I are from the same family, the same *gotra* [clan], but see the difference between us.' Jaspal Singh is also an active member of a political party; he explained his involvement in politics:

See, we do this work [arht] – there are 50-60 farmers who come to me. If there is any problem regarding them, we will get help to solve it only when we invest somewhere (*'agar hum payr kahin par rakhenge'*). Our participation is motivated by that and limited to that.

¹⁵³ The design of this research precluded mapping farmers' political activities in detail (see Chapter 5).

¹⁵⁴ By political position I mean that they are current or former members of the village panchayat, member of the cooperative society, or of the village gurdwara management, all of which are informed by village level politics. I also included households where someone had held a panchayat position in the recent past.

¹⁵⁵ One of my key contacts (not a respondent) in Khanna was affiliated to an important political party and routinely helped such traders and mill-owners with their problems.

This limited evidence appears to corroborate the argument of Martin (2015) that despite the decline of the traditional basis of caste-class dominance of wealthy Jat landowners, the latter continue to be dominant as they have access to powerful ‘networks of influence’ (43) in local and state-level politics.¹⁵⁶

10.6 The Wider Economy

Chapter 4 discussed the fact that Punjab is a leader agriculturally but lags far behind other states in terms of industrial development. A senior official of an agribusiness company stated,

Punjab has good roads, power and some other facilities and so it has a production advantage. This is what drives investment of companies and not government policy. But one natural disadvantage of Punjab is that it is land-locked. Policy-driven investment would require tax initiatives, facilitation, state-of-art industrial facilities – this has been done very well by Uttarakhand.

Another senior personnel of a large rice by-product industry in the state said,

The Punjab government has no funds even to pay salaries. So it blocks our [tax] refund, which in any case is non-interest bearable. Also, if some other party like another state government makes a mistake, it puts the blame on us. Electricity rates increase frequently. The general atmosphere here is not good for industry.

The inertia, and even deterioration, of the industrial profile of the state was visible close to the fieldwork site. Mandi Gobindgarh used to employ many people from in and around Khanna as well. Several (and different kinds of) steel mills in the town have shut down, with a large number of businessmen having suffered losses and workers losing their jobs. Overall, many of Punjab’s famous industries, like bicycles and sports goods, are known to be moving to other states.¹⁵⁷

Punjab’s non-agricultural economy, then, is not a robust one. Even established traders, mill owners and industrialists are finding it hard to continue doing business. In such a situation, farmers, including large capitalists, face serious limits in diversifying into industrial activity within the state. While large farmers have land to spare, there are many other barriers to entry and success in business that they have to

¹⁵⁶ On associative politics of traders and dominant castes facilitating capital accumulation in Tamil Nadu, see Harriss-White (2003) and Basile (2016).

¹⁵⁷ See Rajshekhar (2015).

surmount. This is probably why Jats have a limited presence in capital-intensive non-agricultural businesses (there were none in my survey sample).

Small and large capitalist farmers, therefore, diversify into small non-agricultural activities such as the ones mentioned above. When unsuccessful, this can also be temporary. A small capitalist farmer said,

I also had a restaurant in Khanna for one year, *Samosa Junction*. We sold all kinds of samosas there. But then I left it. If one owns the building, then it is okay. There, I had to pay Rs 40,000 rent, plus AC charges; the fryer was also running. The cost came to Rs 100,000; only after that one could think of an income from it. I also ran it in Ucha Mandi for five years but left that also.

A farmer with 10 acres of his own worked as a bus driver for a private college for 7 years, while leasing-out his land until he decided that it did not pay enough and returned to farming. Others left dairy farming and transport businesses, and abandoned migration. These examples show that the continuation of any kind of diversification depends on how it compares to returns from farming. At least in the case of some (large and small capitalist) farmers and some kinds of work, farming comes out stronger.

Table 10.2 gives rough incomes from agricultural and non-agricultural activities based on estimates gathered by some respondents and those given earlier in the thesis. It shows that there are wide variations in income from different kinds of non-agricultural activities and, depending on the kind of migration, incomes abroad may be even lower than some types of local non-agricultural work. To reiterate, as these are not accompanied by data on assets or operational costs, these figures are tentative and cannot be used to extrapolate to accumulation. My objective in making this table is limited to providing a sense of the relative incomes from agriculture and non-agricultural businesses, and of the *possibilities* for accumulation beyond agriculture by farmers.

The annual income from paddy-wheat farming for a petty producer (Rs 112,500) could be more than that from petty jobs like driving and factory work, and perhaps comparable to them if the burdens of loans are taken into account. Given the risks and investments involved in farming, especially on such a small scale, it is not surprising that there is a trend among petty farming households to diversify towards

other kinds of occupations that are seemingly more secure and stable. The small capitalist agricultural income (Rs 337,500) is comparable to government civil service and military salaries; in fact, these figures are comparable to salaries of good private urban jobs in India. However, very few respondents had any relatives in such jobs.

Inasmuch as large capitalist farmers (Rs 675,000) can earn much more from agriculture than from many private or government jobs and petty businesses, they have an incentive to continue to invest in agriculture. This is confirmed by the dynamic land-lease market. On the other hand, to the extent that many such farmers are looking to move out of agriculture while they are still working or by the time their sons are old enough to take charge of the household, diversification is a function of multiple factors such as increasing risks in agriculture, disdain for farming among the younger generation and the perception of more prosperity and stability in certain non-agricultural avenues.

Therefore, on the one hand, diversification into business can be difficult. On the other, government and well-paid private jobs have become increasingly difficult to get, even for well-qualified youth. The combination of these two things generates cynicism and powers the drive to migrate to other countries, something that requires resources and luck. In such a situation, most middle-aged and older farmers also expressed their extreme concern about the male youth.

Young boys and men do not wish to farm. To most, farming is an unglamorous life of struggle. For those belonging to small farming families, this is also the hard truth, i.e. farming is an unrewarded struggle. For those belonging to large capitalist households, however, this disdain to work on the farm also relates to the complete lack of any *need* to work, since much is mechanized or done by hired labour. The parents of these young boys and men expressed disappointment, both that their sons are not interested in farming and that they have not been able to find work outside of farming.

Table 10.2: Agricultural and non-agricultural incomes

Type of Economic Activity	Estimated Annual Income (Rs)	Notes
Grain mandi arhtia	150,000 – 1,700,000	
Dairy farm	547,500 – 657,000	1,500-1,800 per day (Section 10.1)
Leasing-out combine harvester	140,000 – 200,000	70,000 – 100,000 per season *2
Military soldier	264,000	22,000 per month
Military soldier pension	144,000	12,000 per month
Government civil job	360,000 – 480,000	30,000-40,000 per month
Private school teacher	108,000	9,000 per month
Factory worker	48,000 – 84,000	4,000 – 7,000 per month
Factory foreman	240,000 – 600,00	20,000 – 50,000 per month
Factory accountant	420,000 – 480,000	35,000 – 40,000 per month
Arhtia accountant	180,000	15,000 per month
Mechanic	120,000	10,000 per month
Government Bus Driver	300,000	25,000 per month
Private Bus/Truck Driver	84,000	7000 per month
Petty business	48,000 – 96,000	4000 – 8000 per month (taken from information on shuttering and garment business of different respondents)
Migration – labour in Gulf countries	180,000 – 240,000	15,000 – 20,000 per month
Migration – driver in Gulf countries	600,000	50,000 per month Note: similar jobs in European or North American countries would pay better than in the Gulf
Paddy-wheat farming (2.5 acres)	112,500	45,000 per acre for paddy-wheat cultivation times acreage ¹⁵⁸
Paddy-wheat farming (7.5 acres)	337,500	
Paddy-wheat farming (15 acres)	675,000	

Source: Own household survey 2014-15

¹⁵⁸ The choice of acreage is somewhat arbitrary but corresponds to the average operational landholding of the first two classes (petty producer – 2.5 acres, small capitalist – 7.5 acres). For large capitalists, I have chosen an arbitrary figure over the minimum operational holding. It should also be noted that paddy and wheat were selected for estimating income because of their stable prices and their significance in the economy.

Earlier the case of Jaspal Singh, who set up an inputs shop for his son, was mentioned. His son has two post-graduate degrees from Patiala University and wanted to do a PhD but could not gain admission. Therefore, his father set up the shop for him. On being asked if his son helps him in farming, he said, 'No, *bache toh kaam karke raazi nahin hain* [children are not willing to work]. If they come to the shop before 11am that will be more than enough'. Jagjit of the Gill brothers also said,

Children do not want to do this anymore; my children study right now but they do not even know what variety of potato I have sown in my field. They will just take the car, roam the city and then come home.

[May be not agriculture, but they must be interested in the arht business, right?]

Well, we will not be here forever; if they do not join us, then at some point we will have to shut it.

The wife of Kulwinder Singh, a large potato farmer, lamented that her highly-qualified son (also with two post-graduate degrees) could not find a job but at least he helped a lot on the farm. Overall, in keeping with trends across the country, smartphones, 'urban' clothing and a general consumerist culture dominated the aspirations of many young men.

There were certainly a few respondents in their late twenties who farmed actively, but this was not common. Many young men sought non-agricultural work and those belonging to smaller landholding and less well-connected households found it harder. Unemployed male youth loitering in villages and becoming addicted to drugs and gambling was a common lament of respondents.

10.7 Patterns of Accumulation

Before concluding this chapter, I would like to reflect on the implications of forms of diversification for patterns of agrarian accumulation and differentiation in the region more widely. We know that within Marxist political economy classes are defined on the basis of labour relations and reinvestment of surplus capital. I now analyse these aspects of the classes identified and combine insights from the diversification to arrive at a better understanding of the class dynamics. For the

methodological reasons discussed in Chapter 5, this discussion has necessarily had to be *ex pos*.¹⁵⁹

Table 10.3: Number of households employing a naukhar(s)*

	No	Yes
Petty producer	14	2
Small capitalist	12	1
Large capitalist	16	43
Total	42	46

Source: Own household survey 2014-15

*excludes households in the total survey that lease-out their landholding

I begin with labour relations. As discussed in Chapter 7, gangs of labourers are hired by all farmers for some operations such as paddy transplanting, potato picking, cauliflower transplanting, weeding and picking. Hired labour of this kind is the norm and therefore this cannot be used as a device to classify farming households. The difference was found to lie in terms of whether naukars were being used for agricultural (farming and/or cattle-rearing) activities outside of the operations listed above or if own or daily hired labour were used. These activities could include spraying chemicals, administering the irrigation water supply, feeding cattle, etc. Table 10.3 shows the number of households employing naukars either on a yearly or seasonal basis. The overwhelming proportion of households (93%) that employ a naukhar are large capitalist households. At the same time, of the 16 large capitalist households that did not have a naukhar, 13 had an operational holding of less than 15 acres.¹⁶⁰ So, while in previous chapters I argued that the employment of naukars is linked to the cropping pattern and the availability of (willing) male family male workers, this shows that it is also linked to scale; of course, previously it was also been discussed that cropping pattern itself is scale specific. The significance of employing a naukhar lies in the fact that those who do are *more likely* to be doing no manual labour at all and to be working only as farm managers.

¹⁵⁹ Colatei and Harriss-White (2004) have highlighted the challenges in incorporating diversification into efforts to stratify households. Using cluster analysis and drawing on ‘several contested theories of mobility and differentiation’ (158), they create the following stratification: elites; middle peasants with land, and without land; and, poor peasants with land, and without land.

¹⁶⁰ A handful of farmers with operational holdings of less than 15 acres did employ naukars, but most did not.

As a proxy for capital investments in agriculture, I used ownership of machines that are commonly used in the field for preparation of land for cultivation. Table 10.4 shows the number of households that own one or more tractors, ploughs and levellers each.¹⁶¹ This shows clearly that all the large capitalists own at least one of each machine, as do most small capitalist farmers.¹⁶² The majority of petty producers, however, do not own these machines and are, therefore, a distinct class in terms of capital investments. This, of course, does not imply that these households conduct agricultural operations without machines. Rather, there is a vibrant rental market in almost all machines in the area; they can be rented either from the PACS or from other farmers. Earlier, combines being rented out and farmers preparing land for others for an income was discussed. These rental markets compensate for petty producers not owning machines. So the difference in terms of capital investments lies not in *how* they do agricultural operations but rather in the *ownership* of machines. In other words, everybody will plough, sow and reap a crop in the same way but some will use their own machines for this while others will use rented ones. In this, the petty producers are distinct.

Table 10.4: Ownership of agricultural machinery by class*

	Tractor		Plough		Leveller	
	No	Yes	No	Yes	No	Yes
Petty producer	9	7	10	6	9	7
Small capitalist	2	11	2	11	2	11
Large capitalist	0	59	0	59	0	59
Total	11	77	12	76	11	77

Source: Own household survey 2014-15

*excludes households in the total survey that lease-out their landholding

¹⁶¹ There are many other machines used in the field such as combines, seed drills, potato reapers, disc harrows, rotavators and cultivators. However, these are not always owned and used by all farmers and so there are even wider rental markets in these implements. Capital investments are also made in the form of submersible tube wells. Apart from a few petty producers, all farmers have at least one on their land which they use independently or share with a neighbour. Whether sharing involves rents was beyond the scope of this study.

¹⁶² The two small capitalists who do not own any machines have similar profiles. Their operational holdings are 8.5 and 7.5 acres respectively; they cultivate only wheat and paddy, and have a young adult son to help on the farm.

Table 10.5: Types of diversification by class

	Agriculture-based business	Non-agricultural business	Education or skills-based diversification	Migration	Total Sample
Land leased-out	0	0	4	2	5
Petty producer	1	1	11	2	16
Small capitalist	0	0	6	4	13
Large capitalist	9	11	11	9	59
Total	10	12	32	17	

Source: Own household survey 2014-15

The above discussion reaffirms the utility of the exploratory class categories used in this study. But what does economic diversification mean for this pattern of class differentiation? Previously I discussed the patterns of diversification and their relative accessibility across different classes. Table 10.5 shows the kinds of diversification undertaken by households in the sample survey.¹⁶³ The data clearly shows that businesses involving considerable amounts of capital are a near monopoly of large capitalists, even though none of them include industrial enterprises. The lone petty producer who I interviewed (not part of the survey) who had diversified into such a business had established a successful inputs shop in a village, sustained at least in part by his reputation of being knowledgeable and reliable.

Education and skills-based diversification is more evenly spread, and even appears to be over-represented among petty producers given their total sample. But we should remember that some of this reflects a record of military service, quite prevalent in this region. Also, jobs like bank manager, school teacher or mill accountant are not comparable in terms of income to those of a driver or mechanic. There are also differences between private sector and government jobs (see Table 10.2).

¹⁶³ Some households have diversified through more than one type of activity and have been counted twice. Appendix IV lists the activities included in each type. Note that 'non-agricultural business' includes four households engaged in petty businesses (grocery, garment and spare parts shops).

In at least one case, however, the diversification represents the early success of education in enabling and sustaining diversification. The grandfather of a farmer, Kulwant Singh, worked only seven acres in the years just before Independence. However, his father became a government school teacher. Subsequently, Kulwant and his two brothers managed to obtain government jobs – he as a *kanungo* or revenue officer in the district, and his brothers as a doctor and teacher, respectively. As their father's landholding was divided between them, the brothers are petty producers in strictly agricultural terms. But they are much better-off economically when their non-agricultural income is taken into account.

Therefore, I would argue that economic diversification is an additional axis (to labour relations, capital investments and market dynamics) along which agrarian class dynamics may be understood. In fact, it is the element that upsets neat class categorizations. However, given the complicated ways in which attempts at economic diversification culminate in success or failure, trying to create a hierarchy of classes based on diversification would not only be difficult but also unhelpful in trying to understand the dynamic processes underlying agrarian change. Therefore, alternatively, I would suggest that economic diversification allows us to identify three broad patterns of agrarian accumulation in the area. These patterns have been identified with a specific temporality in mind, i.e. the time of fieldwork and the immediate short term (roughly five years) from then. It is important to identify this temporality because in the long term the aspiration of an overwhelming majority of households across different classes is to diversify into profitable non-agricultural economic work. The patterns are as follows:

1. Households that are investing in agriculture alone: these can be small or large capitalists. The survey results (Table 10.1) show that a large proportion of the latter fall in this category. This is understandable given their relative income from agriculture vis-à-vis non-agricultural income.
2. Households that are investing in agriculture but also simultaneously in the educational qualifications or migration of their children or themselves in the short term: these include both small and large capitalists. When successful, in some cases, this could also add to the number of households leasing-out their landholdings.

3. Households that have already diversified into well-paying economic avenues: these include lessors as well as those who continue to invest in farming. Again, while a majority of these would be large capitalists, it could also include families like those of Kulwant Singh (see above) who retain small holdings but earn high incomes from non-agricultural sources.

Capitalist agriculture in the area then encompasses a spectrum whereby at one end profits, employment of attached labour and investment in machinery are likely to rise with scale and the chances of succeeding at economic diversification are greater. At the other end of the spectrum, smaller capitalists may sometimes (and petty producers even more occasionally) be able to climb up the ladder through profits from using family labour when available, by diversifying the cropping pattern and/or by succeeding in economic diversification. In this flux, while some may succeed and consolidate their status as accumulators, others may be reduced to petty producers or continue to struggle at the same level.

10.8 Conclusion

This chapter has brought out the broad patterns in diversification or attempts towards diversification among farmers in Khanna. The first of these patterns is agriculture-based diversification, which is the most common. Within this, working as arhtias was the most common path, followed by dairy farming and potato trading. These options, let alone those involving mills, require a substantial amount of investment and are inaccessible to many, even to large capitalists. Within the pattern of non-agricultural businesses I came across no evidence of major industrial investment. This could be explained by the overall industrial conditions prevailing in the state, but non-agricultural businesses such as transport, dealerships and private schools are also fairly capital-intensive. The third kind of diversification was through education and skills training. Here, too, there was a difference between higher and lower levels of salaried employment (and businesses). Given the dearth of government and private jobs, education can also be a frustrating endeavour. In this context and set against a long history of such, migration remains one of the most sought after ways of diversifying. Again, some kinds of migration are considered better than others and there is no guaranteed route to success.

A very small proportion of farmers, even large capitalists, are able to diversify into a remunerative business such that they can consolidate themselves in that field. Several of the histories related above highlighted the importance of the family in this; this can manifest in combined strategies of joint families (that may or may not stay together in the future) and/or strategies within a family for the next generation. Similarly, social networks in the form of extended families, village-based, political and economic relations can be crucial to success in diversification. To the extent that this success is being achieved, it is polarizing agrarian society further. Simultaneously, the frustrated attempts of many others to do so are a statement on the larger economy and polity of the state, and can be expected to ruffle the social fabric of rural Punjab in future in ways that are beyond the scope of this research to explore. It also throws the relative position of Punjab's economy vis-à-vis other states in sharp relief, a theme that I return to in Chapter 11.

Chapter 11. Conclusion

This research investigated how liberalisation has shaped agrarian accumulation in India, with an empirical focus on the state of Punjab. It was conducted within the framework of critical agrarian political economy whereby historically developed class relations are given analytical priority. Accordingly, class differentiation among farmers was the starting point of the research, and it was assumed (though also probed) that capitalist farmers would be accumulating. Their strategies of accumulation and changes in them as a result of liberalisation formed the main area of enquiry. Following Bernstein (2010), capitalist agriculture was conceptualized to include both farming and related activities upstream and downstream of the actual production. Therefore, the significance of agricultural markets for accumulation was also studied intensively.

The core fieldwork was conducted in Khanna town in Ludhiana district and four villages around it. Production and marketing of a set of individual crops, namely, paddy, wheat, potato and cauliflower, were studied in depth in order to understand the constraints on and possibilities for accumulation by farmers across different classes. Crop dynamics were examined in relation to other important aspects including landholdings and land-leasing, credit relations and economic diversification. An initial period of mapping important actors, events and processes was followed by farmer household surveys and more focused investigation into specific issues. Heuristic class categories of farmers were created for fieldwork and analysis.

This approach allowed me to map and analyse a wide cross-section of issues that shape agrarian accumulation in Punjab and to study the strategies that capitalist farmers make in order to accumulate. It also allowed me to identify the underlying forces of change in Punjab's agriculture in the 21st century, including potential sources of instability. Further, taking liberalisation as a reference point allowed a glimpse into how its many parts manifest in a specific context and to what effect. However, this approach is limited in terms of explaining the predicament of petty producers and, even more so, of the labouring classes. My methods also precluded

an understanding of how village dynamics and issues of caste, gender relations and politics influence the divergent fates of different agrarian classes. A study of these aspects would have also given a better understanding of collective class action by capitalist farmers. It is also limited in terms of comparing productive investment in agriculture with other kinds of investment portfolios.

The most important shortcoming of this study, however, is the limited data on petty producers, as it prevents an understanding of the full range of accumulators. This also prevents a proper understanding of how much better off large capitalists are. Further, as petty producers constitute the largest proportion of agricultural producers in India, in-depth study of them would have made this research more relevant for country-wide analyses.

In retrospect, the understanding of the predicament of petty producers may have been partially addressed by obtaining a separate cost of production estimate. Ideally, this research could also have been made stronger if I was able to record life histories of farmers and study non-agricultural investments in greater depth.

This chapter explains how this research contributes to the questions raised at the start of the thesis and identifies contributions to specific debates raised in Part I.

11.1 Revisiting the Research Questions

Like Lerche (2013), I argue that agrarian accumulation is continuing under liberalisation. The findings of this research challenge the argument that there is an overall agrarian crisis in the country and that accumulation within agriculture has ceased (Patnaik 2006, 2011). However, I also show that it has become more precarious in this period.

In classical Marxist political economy debates, accumulation by capitalist farmers is understood through labour relations as it is the site of creation and appropriation of surplus value (Thorner 1982a, 1982b, 1982c). This research shows that the dynamics of agricultural markets and land, and possibilities of accumulation outside agriculture are also decisive in whether farmers are accumulating or not.

Many liberalisation reforms were found to have had an impact on agrarian accumulation. Most farmers claimed that costs have increased over time, not least due to reduced subsidies on fertilizers and crop chemicals. The export-orientation of

the economy allowed for the expansion of basmati cultivation in the field area. Sectors such as flour mills and cold stores were deregulated, and credit was extended to these and similar enterprises on a priority basis resulting in an increase in the number of private actors operating in these fields. Promotion of agribusinesses has also led to the widespread production of and trading in different potato varieties, especially processing varieties. Changes in seed policies have allowed domestic and transnational agribusinesses to invest in new seeds, and expanded the production and scope of marketing for cauliflower. One of the ways in which agricultural credit has been revamped is in the form of the KCC which has altered the credit dynamics in the field. These reforms have created both profitable opportunities for large capitalists and further sources of vulnerability.

An important factor contributing to the continued accumulation by capitalist farmers in Punjab is the State-led procurement of wheat and paddy and guaranteed payment of the MSP. This also allows for a minimum subsistence income for petty producers. Large capitalists have also benefitted from selective engagement with corporate strategies. They may do this either through the selective use of hybrid seeds in the case of cauliflower, by the decision to commit to or leave contract farming, or varying the acreage of basmati they grow based on anticipated prices offered by basmati firms. These options have been shown to be less easily available to petty producers who are thus disadvantaged as a result of these changes. The fact that many capitalist farmers are able to use the presence of corporate agribusinesses to their advantage indicates that there is no general exploitative relation between corporates and farmers as argued by Weis (2007), McMichael (2005), van der Ploeg (2009) and Patnaik (2011). I have shown that these relations are contingent on the class position of farmers, the nature of corporate intervention and the wider structure of the market.

At the same time, this form of accumulation is also vulnerable. Crops other than paddy and wheat are subject to extreme price volatility, as seen with basmati, potato and cauliflower. Even for large capitalists, agricultural income may not be enough for their expenses, 'wasteful' or otherwise and, as a result, they may be drawn into complex circuits of credit and indebtedness. The successes of capitalist farmers that seem to be 'apparent' by their crop incomes or their landholdings instead *may* rest on thin ground. For instance, leasing-in large areas of land does not necessarily result in

financial sustainability. Similarly, high crop incomes in one annual cycle may not be enough to rid a farmer of debt accumulated over one or multiple years. Finally, as liberalisation continues to unfold, the State now proposes to withdraw its support from pormal and wheat procurement; if this comes to pass, the agrarian landscape in Punjab can be expected to change radically.

Social relations between farmers and traders, under-researched in Punjab, were found to shape accumulation in important ways. Different kinds of traders mediated the sale of crops in different ways and, therefore, were crucial to the profits realized by farmers. Grain mandi arhtias had particular significance as they were the main source of informal credit for farmers. Under liberalisation, there were subtle but significant changes in these relations. The expanded production of potatoes, for example, has led local and non-local traders to purchase crops directly from the farms, allowing farmers to bypass the arhtias in the sabzi mandi. Similarly, the volatility in basmati prices disrupted the credit relations between arhtias and traders.

Further, the KCC has led to a considerable decline in the dependence of large capitalists on arhtias. This differs from Chavan (2005) and Ramakumar and Chavan (2011) who argue that credit reforms have strengthened informal sources. Nevertheless, arhtias continue to retain power as the lender of last resort. Where limits have been used up by other expenses and savings are inadequate, arhtias can aid with production or consumption expenses. Often they are also crucial in helping farmers, especially smaller farmers, rotate their limit and remain solvent in the banks' records.

Finally, different capitalist farmers are negotiating these changes in different ways. Some are diversifying their crop profile from pormal and wheat to vegetable crops such as potato and cauliflower. Moreover, farmers make different decisions about acreage and variety of crop to cultivate. For example, some large farmers may cultivate basmati across their entire paddy acreage while others do it only in part in order to secure a guaranteed profit from pormal. The same applies to cauliflower which may be cultivated year round by some farmers on all of their land, while others may also intermittently grow wheat or paddy. Some choose to forego cultivation of wheat, the main food crop, entirely. Smaller farmers, on the other

hand, are likely to continue with cultivating wheat and paddy that give assured returns.

Scale was found to be an important factor in negotiating the possibilities of accumulation within agriculture successfully. For example, land-lease rates were so high and markets so volatile that petty producers or small capitalist farmers might not be able to offset the costs of leasing-in land, even after cultivating three crops a year. In the credit market, arhtias charge higher interest rates to small farmers, making them more vulnerable. On the other hand, banks tend to lend only limited amounts to such farmers, which they may not be able to repay either. Categories created on the basis of land were also found to have differences in terms of patterns of labour hiring and capital investment within agriculture. Therefore, it has been shown that in conditions of capitalized agriculture in Punjab, land size matters for class position. This substantiates findings by Rakshit (2011) and Rangarajan (2013).

Economic diversification is another strategy used by capitalist farmers to both manage vulnerabilities in agriculture and expand the scope of accumulation. However, this is a wider trend within agrarian capitalism in Punjab and elsewhere, and no clear link could be established between these strategies and liberalisation. The case of seed potato trading and establishment of cold stores is an exception; this is a direct consequence of the entry of corporate agribusinesses in the production and marketing of this crop. The strategies used for diversification can vary on the basis of several factors: available capital, family dynamics, access to education and political networks, among others.

Additionally, the research recognizes that there are elements of both compulsion and choice in the form that agrarian accumulation takes. Scale and the need for credit can be considered structural compulsions. The research findings, for example, establish that large-scale production is an important factor contributing to successful accumulation. This in turn requires large capital investments in leasing-in land, renting/purchasing machinery, employing labour, etc. that usually require credit. On the other hand, large capitalists choose to invest in different crop combinations, and may invest in quite different diversification strategies, reflecting elements of agency in the process of accumulation.

Collective strategies of accumulation included, firstly, mobilisation through the farmers' union and pulling their political weight, seen in the State procurement of basmati and relaxation of norms of wheat procurement. Many large capitalists hold positions of power locally, which is arguably one of the reasons they have a strong voice in state politics. Farmers may also mobilize around specific interests; this was seen in the case of village level committees that were formed to reduce lease rates. Family and community networks too were crucial for accumulation through economic diversification.

While different kinds of capitalist farmers were negotiating – individually and collectively – the changed policy context, this was situated within the context of **competition between capitals**. Capitalist farmers choose different strategies in order to maximize income from agriculture. In this, some succeed more than others, signalling that competition exists. Multiple factors set the terms of this competition; they include the size of operational holdings, and any costs of leasing-in land, access to credit, labour use patterns, and marketing networks. This research indicates (well within limitations of its data) that in this competition, large capitalists are *more likely* to succeed than smaller capitalists.

The findings indicate that petty producers, and even small capitalists, are structurally disadvantaged in a number of ways both within and outside agriculture. At the same time, however, accumulation has also become riskier under liberalisation. While large capitalists are better placed to survive and benefit from the changes, many among them are also unable to invest in land or capital-intensive non-agricultural businesses to expand their basis of accumulation. This means that there is a 'continuum of tendencies' (Oya 2004, 309) of class differentiation in Punjab's countryside and the social base for accumulation will potentially narrow in future.

Competition between capitals, however, also takes place across sectors, whereby the question is how profit is distributed between them. In this research, such competition is reflected in the relations between productive agrarian capital and mercantile capital. The main aspect of this relation studied here is that between farmers and arhtias. In principle, even though the arhtia's commission is paid as a percentage of the price received by the farmer, the source of the commission is the State. The arhtia is not meant to take a 'cut' of the farmers' profit, and the

relationship between them is not designed to be competitive. However, in practice, there are different ways in which this competition is manifested.

Firstly, Chapter 4 noted how arhtias in the grain mandi had succeeded in increasing the rate of commission permitted by the State over the years. Therefore, the commission takes the form of profit that the arhtias claim from the society at large through the State's mediation. Secondly, due to the moneylending role of arhtias, the prices received by farmers are dependent on the interest they need to pay the arhtia against any outstanding loan. Therefore, informal credit does indeed enable the latter to appropriate a share of the farmers' profits.

At the same time, this research shows that productive agrarian capital and mercantile capital are not water-tight categories, corresponding empirically to farmers and arhtias, respectively. For example, some large capitalist farmers also give credit to the arhtia on interest. In such cases, the farmers can be thought of as appropriating a share of the arhtia's profit in addition to the profits they may earn through agricultural production. Moreover, farmers embody both forms of capital when they become arhtias as well.

In the market for vegetables studied here, such competition may play out differently. For example, the fact that over the years, farmers have obtained access to multiple channels of sale can be thought of as undermining the profit of arhtias in the vegetable mandi compared to when they were the only channel. The complex nature of these relations, therefore, shows that competition between capitals does not necessarily benefit one or the other type of capital and is difficult to map concretely.

11.2 Further Contributions

11.2.1 Agricultural Liberalisation in India

This research has studied the impact of liberalisation on accumulation through the dynamics of production, agricultural markets, and land and credit relations. This allows liberalisation to be understood as more than a proxy for the expansion of corporate capital, although that is an important aspect. Rather, it situates liberalisation firmly within a broad canvas of conditions that together shape agrarian change. While liberalisation is about a shift in the balance of power in favour of the

private sector, the processes through which this may take place are complex, diverse and locally rooted.

This research has also contributed to an understanding of the balance between the State and the market under liberalisation. The private sector has come to occupy a greater space in the agrarian economy; for instance, in the form of corporate agribusinesses and private commercial banks. At the same time, local private capital in the form of arhtias, pucca arhtias, mills, etc. existed and thrived in the economy well before liberalisation. Moreover, by continuing to procure parmal and wheat from the mandis of Punjab, the State continues to be the all-important actor in agriculture. So, like Richa Kumar (2016), this research finds that the boundaries between State- and market-led development in the period before and after liberalisation are messy. More generally, it is also difficult to maintain a dichotomy between State and market when empirical realities are considered.

Admittedly, the State is keen on withdrawing from the market and on ensuring that crops other than parmal and wheat are produced and sold according to the rule of the market. Yet it intervened to procure basmati from the mandis when the basmati firms pulled out. This raises two issues. Firstly, the State is forced to act against its own policy prescriptions due to political exigencies, which is crucial in determining the form and content of liberalisation. Not only does such intervention undermine the State-market dichotomy in the mainstream understanding of liberalisation, it is also contingent on, among other things, the particular balance of power between different classes in a region and thereby leads to context-specific manifestation of liberalisation reforms. Secondly, there is a difference between the compulsions and actions of the central and state governments and their significance for the agrarian fortunes of different regions and the classes in them. Both these issues, emerging from the research, have only been surveyed cursorily here and have scope for further enquiry.

Another issue is that while in the literature, formal and informal credit are presented in opposition to each other, this research has found that they can also support each other. Moneylending by arhtias *in the current form* is dependent on State procurement and supported by priority sector lending norms which finance their moneylending operations. This further implies that the State itself creates the

conditions for the informal economy to thrive. This supports Harriss-White's (2003) argument that the State is deeply implicated in the black and informal economy of India. This, too, raises the issue of the forces that enable such State involvement and how they might be changing under liberalisation, an area for potential further study.

11.2.2 Traders and Agricultural Markets

Another major argument and finding of this research is that agricultural markets and farmer-trader relations are crucial factors shaping the process of agrarian accumulation. This research, therefore, builds on and substantiates the arguments of Harriss-White (1996, 2008, 2010) and Banaji (2016). Like Harriss-White (1996), this research studies farmer-trader relations and the links between production and the market structure. But, while in her study farmers are studied in relation to traders who are the focus, this research is original in keeping farmers at the centre of analysis even when studying the markets; in other words, as mentioned in Chapter 1, it is a study of traders in relation to farmers.

In mapping different commodities that farming households cultivate over a single year, I confirmed Harriss-White's (ibid.; also Harriss-White and Ali Jan 2012) argument that traders are a heterogeneous category. They perform many different functions and have diverse portfolios both within and across different commodity markets. But in addition to this, this research was able to understand the relative significance of these commodities for farmers. For example, potato and cauliflower present the opportunity to earn large profits but also involve significant risks of losses. Paddy and wheat, on the other hand, provide guaranteed income and link them to grain arhtias who can extend credit for any production and consumption purpose.

I have argued that there is a difference between arhtias in the grain mandi and those in the sabzi mandi in terms of extending credit. This is at least partly a function of the fact that the former are assured of the sale of crop at a known MSP and can anticipate the returns from moneylending. This indicates two things. First, markets constitute an independent system with their own constraints, an argument made by Harriss-White (ibid.). Markets are also structured independently and differently depending on the materiality of the commodity in question as discussed in Section 7.5.

Second, it indicates that arhtias in the sabzi mandi do not wish to bear the price risk involved in inter-linking credit, produce and marketing, something which the arhtias in the grain mandi are able to do. This is a concrete illustration of Bell and Srinivisan's (1989) abstract argument about the peculiarity of this kind of inter-linking as compared to credit-tenancy transactions.

The research also found that credit relations between farmers and arhtias are not always exploitative, or equally exploitative, for all farmers. Interest rates charged by arhtias are much higher than those charged by commercial banks and cooperatives. However, even within that, the rates are usually relatively higher for smaller farmers than for large capitalists. Some among the latter also lend *to* arhtias to support their credit operations, indicating a kind of role reversal. This argument is then different from that of Bhaduri (1983); it supports the position of Bharadwaj (1985), Srivastava (1989b) and Crow and Murshid (1994) that credit relations are dependent on production structures. To the extent that large, wealthy capitalist farmers cultivate relations with arhtias, it is reflective of the arhtias' ability to withhold 'selective extension of privileges' (Hart 1989) in case of an emergency, thereby indicative of some of the basis of the arhtias' social power.

In Chapter 2, I argued that Marx's category of 'merchant's capital' is abstract and it hardly ever exists in the real world in a pure form. The findings of this research support this. For example, even though rice mills and potato-processing companies operate in the 'market', they embody elements of productive industrial capital. Grain arhtias, on the other hand, represent a form of merchant's capital, although they perform some necessary productive functions such as the cleaning and drying of grains, and packing and loading for transportation and storage.

This implies that the categorization between productive and merchant's capital is relevant only to a point, and its significance in determining the relation between traders and farmers, often assumed to be exploitative, needs to be understood empirically. This research shows that the nature of these relations depends on three issues.

1. Whether credit is involved and the terms of the same: this makes the relation between the farmer and the arhtia in the grain mandi distinct from other farmer-trader links in the area;

2. Position of the trader/agro-commercial firm in the market: basmati mills are the only buyers of the crop in the market, so shifts in their strategies can seriously impact farmers. On the other hand, flour mills compete with the State for wheat and this determines the prices they pay to farmers. Similarly, both large capitalist farmers and agribusiness firms may renege from the contract under contract farming for seed potatoes as the crop has a vibrant open market; and,
3. Materiality of the commodity: the requirement for paddy to be processed places farmers' fortunes at the mercy of the mills. Similarly, farmers cultivating cauliflower on a large scale chose to sell to traders who come to their fields rather than sell directly in the mandi at least partly due to time constraints emerging from the heavy labour supervision requirements of cauliflower production and the volume of the produce. The different temporalities involved in the harvest of potato compel farmers to potentially engage with different kinds of traders and in different spatial locations.

On traders under liberalisation, Harriss-White (2003) argues that the intermediate classes were able to retain their power in the economy in the first decade of liberalisation. Rakshit (2011), on the other hand, argues that the new traders, represented by the corporates or those who have links to them, are more exploitative than the old. Alongside Kaur et al. (2007), Harriss-White (2008) and Krishnamurthy (2011), this study is among the very few to provide a detailed analysis of traders under liberalisation.

Building on the work of Harriss-White (2003), I have shown that the politics of the market allows the intermediate classes to maintain their power even as they negotiate policies introduced by liberalisation and the entry of national or international corporate capital. Informal social relations and business networks were found to be crucial for various aspects of arhtias' market operation in grain mandis, e.g. the real procurement process of paddy and wheat, mobilisation of finances for moneylending and building a farmer-client base. They also use collective mobilisation and invoke party politics in order to protect their interests. In the potato and cauliflower markets, farmers also need to proactively build reliable relations with traders across multiple markets to ensure that they receive the best price for their produce.

At the same time, these classes may succeed in retaining power without necessarily stifling the interests of corporate capital, as seen in the case of the wheat silos in Moga. I have argued in fact that there are elements of both conflict and cooperation between old and new traders. For example, in the basmati market, basmati mills work via the arhtias to procure supplies, but the dependence of mills on world market prices and their delayed payments jeopardize the arhtias' credit operations. Similarly, the arhtias in the sabzi mandis, both in Khanna and elsewhere, worked in cooperation with processing firms to procure supplies and, therefore, added occasional trading to their portfolio. Agribusinesses dealing in seed potatoes also leased newly-built cold store space from (usually) Jat owners. In this sense, corporates were integrated with the local economy and became one of many actors in the agro-commercial landscape of the field area. Moreover, as in the case of corporates and farmers, we cannot say that there is a singular relation between corporates and traders. The State plays a crucial role in maintaining this balance between old and new trading and agribusiness capital, and there is scope for further study of this aspect.

In fact, liberalisation might be bringing out the different interests of the constituents of the intermediate classes. For example, while arhtias are apprehensive about the increase in basmati trade, the same trade has allowed for the emergence of pucca arhtias (who are also arhtias and/or brokers) who have a vested interest in its expansion. Similarly, the interests of rice mills and flour mills are completely different with respect to the withdrawal of State-led procurement from Punjab. Any study that focuses on traders and markets per se and not only in relation to farmers can be expected to reveal further changes of this kind under liberalisation as well as changes in the wider politics of the market *à la* Harriss-White.

Finally, as Harriss-White (2008, 2010) has for West Bengal and Tamil Nadu, this research has shown that agro-commercial classes should be considered integral to Punjab's agrarian capitalism. Capitalist agriculture in Punjab is often referenced only through the dynamics at the farm level. While the State procurement of paddy and wheat is recognized as supporting capitalist farming, it is still considered external to agriculture. My contention is that agrarian capitalism in Punjab could not have taken the form it has without State-supported procurement. Moreover, this system has

created agro-commercial classes such as arhtias and rice mill owners that have a vested interest in the perpetuation of the system.

11.2.3 Punjab in India

This brings us to the final rubric of contributions made by this research, i.e. how do developments in Punjab's agriculture relate to all-India developments?

Punjab is at the extreme end of the model pursued across India for agricultural growth. It is also unique in terms of the landholding pattern and the consolidation of large capitalist farmers. Therefore, it provides an excellent showcase of the ways in which accumulation under agrarian capitalism so developed is vulnerable. Agriculture in Punjab shows signs of cyclical crises typical of capitalism everywhere: one major sign is ecological distress, discussed in Chapter 4; another is the credit complex where debt is transferred from one social actor to another rather than being repaid, which is unsustainable.

In Section 11.1 I discussed how accumulation has become more precarious under liberalisation. However, not all the sources of risk are directly linked to liberalisation reforms. The form that vulnerability takes is shaped by both macro-economic issues and the local or regional context. For example, the stagnation of Green Revolution technologies due to ecological constraints, and fragmentation of landholdings (which then creates the demand to lease land) are linked to the longer agrarian history of the region. Similarly, the shift away from State-supported paddy and wheat procurement would not be an issue in regions of the country where this kind of support has never been made available. In fact, accumulation in other regions might be more precarious than in Punjab precisely because of the absence of similar forms of State support.

Regions are also different in terms of commodity-specific risks and opportunities. With respect to this research, it should be noted that high-quality basmati can only be cultivated in a few states in north-west India, Punjab being one of them. The field area per se was also unique in terms of being extremely fertile even for Punjab and therefore able to support a wide range of crops. It is also among the few areas in the state and in India where disease-free seed potatoes can be cultivated. Other high-value crops (such as pepper and ginger) cultivated in other regions of India might bring different conditions to bear on processes of agrarian change.

On the issue of economic diversification, an important all-India trend, this research supports the position of Upadhyaya (1988a) that investment outside agriculture is motivated by different factors, such as the need to invest surpluses, to escape distress within agriculture, the desire to avoid anticipated distress within agriculture and the unwillingness of younger males in the household to engage in farming. Therefore, diversification is not undertaken only as a desperate act, as argued by Rangarajan (2013) and, even among large capitalist farmers, availability of surplus is not the only reason for diversification, something missed out in the analyses of Damodaran (2008) and Lerche (2014).

However, unlike in AP, Tamil Nadu and Gujarat, diversification by capitalist farmers is not leading to wider industrial development. A broad overview indicates that this could be due to the power of the Mahajan castes (ibid.; Damodaran 2008). This research found, for instance, that Jats were less likely to invest in industrial ventures where they did not have prior experience and State support (unlike rice mills). Similarly, although this is not industrial activity, Jats were also less likely to become arhtias dealing in fruit as they had no experience or trading networks in this business. Another reason for the inability of accumulation to facilitate industrial development in the state could be that Punjab's economy is generally not considered to be conducive to industrial development, which in turn could be a consequence of the nature of federalism (as argued by Singh 2009). The logic of investments across economic sectors is certainly an area that requires further investigation.

I have also shown how agrarian accumulation links to the wider economy. The property boom and bust created a temporarily vibrant land sales market within agriculture which was used by both small and large farmers in different ways. The issues in other economic areas, such as manufacturing, transport or education, also influenced whether farmers would succeed in diversifying their income. Land-leasing is also impacted by trends in the wider economy, as it is usually those who are able to find relatively more rewarding work outside agriculture – either for subsistence or accumulation – who lease-out their land. On the other hand, the decline in crop prices in the fieldwork year led to a ripple effect of cash constraints in all agriculture-linked trades and industries. Overall, I have identified new ways in which boundaries between agriculture and non-agriculture are dissolved. Similar phenomena in other places can be investigated.

This research also enables us to reflect on how agrarian capitalism has evolved in India. During the 1960s and 1970s, when the ‘mode of production’ debate took place, capitalism in the Indian countryside was understood as being in its nascent stages, even in the extreme case of a state like Punjab. Agrarian capitalism has consolidated itself in most parts of the country now. Accordingly, a significant change has been in terms of the nature of agrarian classes: if they ever were, classes are no longer purely ‘agrarian’. Both labour and capital are widely involved and invested in the non-agricultural sector, presenting analytical challenges in studying class differentiation.

In terms of the place of Punjab in India, it is worth noting that while it was an exception within India in the 1970s, it is less so now. The difference between Punjab and other regions now is not one of capitalism versus non-capitalism, but how capitalism has developed differently in different places. A more tentative conclusion is that within the state, possibilities of high returns from capital intensification in paddy and wheat production look increasingly unlikely due to ecological limits. Further, high value crops present a greater possibility of high returns but on riskier terms. On the other hand, an element of Punjab’s agrarian capitalism that has not changed is the supportive role of the State, which, as mentioned earlier, undermines the claim of the decreased role of the State under neoliberalism.

Overall, with respect to the trajectory of agrarian development in India as a whole, this research has shown that highly capitalised, relatively large-scale farming can be both profitable and vulnerable under conditions of State support and vibrant agricultural markets. Secondly, it has established that traders and ‘middlemen’ should not be portrayed as necessarily obstructive to economic growth. Finally, if anywhere, one would expect agriculture to be profitable in Punjab given its agrarian history. The same cannot be said for other areas of the country. However, it can be argued that in areas of highly capitalised agriculture, it is likely that agribusinesses (global and domestic) and local traders would want to carve space. When this happens, it cannot be assumed that this would be disruptive to the profitability of capitalist agriculture.

This research centred the capitalist farmer in its analysis, something that is uncommon in studies on Indian agriculture. By focusing on capital, I have been able

to explore the source of dynamism in the agricultural sector as well as the nature of the challenges that confront it. I have also argued that liberalisation has taken shape through close interaction with the local political economy. In bringing out the ability of capitalist farmers to build on historical advantages and negotiate new changes, this research has established that agriculture in India is far from destroyed under liberalisation and much remains to be said about agrarian change in India in the 21st century.

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Appendix I: Ranking tables of districts for site selection for fieldwork

Table A	% Operational Holdings					Average Yield per Hectare				
	Marginal	Small	Semi-med	Medium	Large	Rice	Wheat	Mustard/Rapeseed	Sugarcane	Potato
Gurdaspur	3	2	6	19	20	18	18	7	6	15
Amritsar	14	4	1	16	16	20	13	3	9	2
Tarn Taran	12	6	2	13	15	19	16	#N/A	14	12
Kapurthala	8	10	5	11	9	12	15	4	7	4
Jalandhar	19	16	8	4	5	15	9	7	11	1
S.B.S. Nagar	4	3	11	17	14	8	8	12	10	8
Hoshiarpur	2	5	15	18	17	13	20	13	13	9
Rupnagar	1	1	20	20	19	17	19	11	5	14
S.A.S. Nagar	9	7	4	14	18	11	17	14	12	11
Ludhiana	13	13	13	9	6	4	4	1	3	3
Firozpur	18	19	17	2	2	16	12	2	8	16
Faridkot	10	12	14	5	11	7	7	#N/A	#N/A	18
Muktsar	20	20	18	1	1	14	10	10	#N/A	19
Moga	5	8	10	12	13	2	3	#N/A	#N/A	5
Bathinda	16	18	16	3	3	6	11	9	#N/A	10
Mansa	17	17	12	7	4	9	14	5	#N/A	17
Sangrur	7	9	3	15	12	3	1	6	2	13
Barnala	6	15	19	6	7	1	5	#N/A	#N/A	20
Patiala	15	11	9	10	8	10	2	#N/A	1	7
Fatehgarh Sahib	11	14	7	8	10	5	6	#N/A	4	6

Notes: 1. All the ranks are based on the data from the Statistical Abstract of Punjab (Government of Punjab 2012b).

2. Independent data for the districts Fazilika and Pathankot are not available for these factors and thus these districts do not figure in the table.

Table B	<i>Cropping Intensity</i>	<i>Tractors per 1000 ha. NAS</i>	<i>% NAI to NAS</i>	<i>Tractors per ha. of NAS</i>	<i>Threshers per ha. of NAS</i>	<i>Reapers per ha. of NAS</i>	<i>Combine Harvesters per ha. of NAS</i>	<i>Combine tractors per ha. of NAS</i>
Gurdaspur	18	13	85-90	15	18	12	8	16
Pathankot		22	>99					
Amritsar	7	20	>99	19	11	17	16	12
Tarn Taran	16	16	>99	18	12	19	13	11
Kapurthala	2	10	>99	10	10	20	11	15
Jalandhar	19	12	>99	9	8	16	10	14
S.B.S. Nagar	11	9	90-95	8	7	13	6	13
Hoshiarpur	17	17	90-95	17	5	18	20	19
Rupnagar	14	2	85-90	3	3	7	15	17
S.A.S. Nagar	20	8	85-90	11	6	14	19	18
Ludhiana	4	5	>99	6	2	9	4	7
Firozpur	13	19	>99	20	20	15	8	8
Fazilka		21	>99					
Faridkot	3	3	>99	4	19	10	5	2
Muktsar	9	13	>99	13	14	11	12	9
Moga	8	4	>99	5	17	5	2	1
Bathinda	12	11	>99	12	16	6	14	5
Mansa	10	17	>99	16	1	8	18	6
Sangrur	5	6	>99	7	13	1	17	10
Barnala	1	15	>99	14	9	3	7	4
Patiala	6	7	>99	1	15	2	1	3
Fatehgarh Sahib	15	1	>99	2	4	4	3	20

Notes: 1. NAS is Net Area Sown; NAI is Net Area Irrigated; Cropping Intensity is calculated by dividing Total Cropped Area by Net Area Sown.

2. All figures are ranks, except NAI to NAS which is a proportion expressed as a percentage.

3. Data on NAS, NAI and No. of Tractors per 1000 ha. NAS is from the Statistical Abstract 2012; data on tractors, threshers, reapers and combines is from Village Directories 2011-12 (Government of Punjab 2012a) but the NAS used to calculate their figures per hectare of NAS for the purpose of ranking is from the Statistical Abstract 2012.

Appendix II: Farmer Household Survey Questionnaire

1. RESPONDENT PROFILE

Village..... Residence..... Interview Date

Name of Respondent.....Religion..... Official Caste category.....Caste/Subcaste.....

2. HOUSEHOLD PROFILE

ID	Relation to Respondent	Sex	Name	Birth Place	Age	Marr ied?	Educati on ¹⁶⁴	Where Educated ¹⁶⁵	Languages ¹⁶⁶	Other Notes
1										
2										
3										
4										
5										
6										
7										
8										

¹⁶⁴ Indicate whether illiterate (1); literate but without formal schooling (2), less than Primary (3), Primary (4), Middle (5), Matriculate (6), Intermediate (7), Graduation or above (8), Professional degree/diploma (9).

¹⁶⁵ Indicate whether local government, private school (which one), or outside area (where?)

¹⁶⁶ Indicate which languages are spoken by each: English, Hindi, State language (specify), Regional Language (specify), Local Dialect (specify)

Household Members Who Have Left in Last 20 Years (to other houses in settlement or nearby, or migrated away and maybe sending remittances back or forth, or married out)								Why Left?	Where are they Now? Doing What?	Remittances? How much?
1										
2										
3										
4										
5										
6										

3. HOUSE OCCUPATION/CONSTRUCTION HISTORY

When was this house built? Since when are you living in this house?

In whose name is the name of the land?

4. GENEALOGY (TO BE OUTLINED AT NEXT PAGE)

- Follow to as many generations back as you can go
- What kind of work did your parents, grand parents, great grand parents do? (point is to trace any changes across generations)
- What kind of education did your parents, grand parents, great grand parents have? Who were the first person in the genealogy to get educated to the following levels: (matric, inter, BA, MA, PhD)

5. ASSETS

(details on the number owned, when and how acquired, if any are leased-in or leased-out + the terms, how many days used, who pays for the diesel)

Vehicles:	Other:
Tractor:	
Trolley:	
Tube well:	
Thresher:	
Combine:	
Fodder-maker:	

6. LAND

	Homestead Land	Own land cultivated	Land leased-in	Land leased-out	Land in 'adh-batai'
Area					
Where					
In whose name/whose land/leased to whom					
Crops produced					
Since when					
Rent/sharing terms (if applicable)					
Any land bought/sold (including 'land procured by government/mortgaged in last ten years (to/from whom/why/details):					

7. LIVESTOCK

Which livestock do you own (oxen, buffalo, cows, goats, horses) and how many?

How many give milk? What is the milk yield of the animals?

Do you grow or buy their feed or both?

What do you do with the milk of the milch animals? How much/what proportion is sold? Where? What are the prices like?

8. LABOUR

Type	How many?	Who? (gender, caste, region)	For what activities?	On what terms & conditions? (payment in cash or kind, for how long etc.)
Domestic Servants				
Hired Agricultural Labour				
Naukar				
Other				

9. WORK/LIVELIHOODS/INCOME

9.1 Crop income

Name of crop	Area of cultivation	Cost per acre (w/o lease rate)	Cost per acre (w/ lease rate)	Income/Profit per acre	Yield per acre	Other notes (incl. sale channel)
Paddy						
Basmati						
Wheat						

9.2 History/profile of diversification

(To trace and document whether anyone tried something different in relation to agriculture in the past and succeeded/failed)

Has anyone in your family done any other kind of work/business (incl. dairy farm) in the past? Were they successful? Why/why not? Any details of income?

10. CREDIT AND DEBT

10.1 Large **one-off expenditures** in **last 5 years**? Health/ illness; Wedding; Dowry; Brideprice; Funerals, puja/pilgrimage; crop failure; private education; machinery

What for	When	Cost	How did you get the money (sources, terms and conditions)	Paid back/how?

10.2 Present credit/debt situation

Details may include interest rate, how much is monthly pay, how long do you have to pay back, is there any security –eg land, labour, family member given creditor for work; additional services provided for free by borrower

10.2.3 Have you currently borrowed money from any person/institution (bank, cooperative, arhtia)? Details.

10.2.4 Have you currently lent money to any person/institution? Details.

11. GOVERNMENT/NON GOVERNMENTAL PROGRAMMES. Government or NGO programmes household has benefited from in **past five years**.

Life Insurances or other policies? If so, who and what type?

Agricultural loans/subsidies:

Any loans for livestock/dairy, poultry farming, rice mills etc.:

12. OTHER NOTES

Appendix III: Glossary

<i>Adh-batai</i>	A form of sharecropping whereby farmers and labour gangs contribute a share of inputs towards production and share the profits
<i>Arhtia</i>	Commission agent
<i>Custom milling</i>	The process through which the rice mills process paddy and deliver rice to the FCI
<i>Dasti</i>	Informal transactions between traders, mill owners and/or farmers to finance trading and/or moneylending activities
<i>Jat</i>	Dominant agrarian caste
<i>Kanungo</i>	Revenue officer in the district
<i>Kharif</i>	Summer crop
<i>Mahajan</i>	Mercantile castes
<i>Mandi</i>	Regulated wholesale market
<i>Naukar</i>	Attached farm labour, employed on monthly or annual contracts
<i>Parmal</i>	'Government quality' paddy or paddy procured by government
<i>Pucca arhtia</i>	Traders in the wholesale market who make purchases on their own behalf or on behalf of other persons/firms in exchange for a commission
<i>Rabi</i>	Winter crop
<i>Sheller</i>	Rice mill
<i>Theka</i>	Land leasing arrangement
<i>Toori</i>	Crop residue used as fodder
<i>Zimidar</i>	Farmer

Appendix IV: Types of Diversification Recorded in the Household Survey

This appendix disaggregates the data given in Table 10.5 for the types of diversification across classes in the household survey. This includes all past or present, successful or unsuccessful attempts at diversification by these households.

Agriculture-based business

Arhtia – 2
Potato trade - 1
Dairy Farm – 2
Input dealership – 1
Renting out combine – 3
Cattle trade – 1
Total – 10

Non-agricultural business

Transport business – 3
Tractor agency – 2
Property dealer – 2
Owned shop space on rent – 1
Grocery shop – 2
Garment shop – 1
Mechanical spare parts shop – 1
Total – 12

Education or Skills-based diversification

A few households are involved in more than one type of education or skills-based diversification, and they have been counted twice here. The total here, therefore, does not tally with the figure given in Table 10.5

Military service – 8
Bank employee – 2
Government or private school/college teacher – 7
Government civil job – 2
Police – 1
Inspector in a state procurement agency – 1
Unknown – 1
Electricals shop – 1
Shuttering shop – 1
Mechanic – 3
Mill Accountant – 2
Mill supervisor – 1
Mill labour – 1

Mill driver – 1
Bahai – 2
Carpenter – 1
Total – 35

Migration

One household had members doing different things in different countries, and they have been counted twice. The total here, therefore, does not tally with the figure given in Table 10.5

Labour job in Italy – 6
Labouring job in Middle East (including driving, carpentry in Dubai) – 5
Business in UK, US, Belgium – 4
Driving in US (taxi or trolley) – 2
Study in UK – 1
Total – 18