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Welfare and Efficiency Implications of an Agricultural Reform in Western Terai, Nepal

Jon Audun Kvalbein

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“There are districts in which the position of the
rural population is that of a man standing permanently
up to the neck in water, so that even a ripple
is sufficient to drown him.” (Tawney 1966:77)

Abstract

This master thesis investigates the welfare effects for bonded laborers (*kamaiyas*) in Western Terai of a ban on permanent labor contracts in July 2000. The ban was credibly enforced and within a short time the number of bonded laborers was reduced significantly.

By and large the bonded labor institution in this region must be seen as a voluntary agreement whereby a risk averse worker entered into an annual labor contract with a risk neutral landlord. The contract provided a fixed income which smoothed consumption for the worker, who thereby avoided exposure to an unpredictable labor market for casual workers. The *kamaiya* worker received other benefits as well, such as housing, food and access to credit. However, the working hours for *kamaiyas* were very long.

The former *kamaiyas* may be divided into two groups, those who have become sharecroppers and those who work as casual laborers. The bonded labor contracts have mainly been replaced by sharecropping. Both groups have in common that their annual income has become more volatile since 2000. However, I argue that both groups have become better off. The reason is that the ban on bonded labor has increased the wage level for casual workers in villages with a high presence of *kamaiyas*, which implies that the outside option of former *kamaiyas* has increased. I also argue that sharecropping is a more efficient institution than the *kamaiya* labor system.

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Bergen, 2007
Jon Audun Kvalbein

Content

1. Introduction

1.1 Bonded Labor – Global and Historical Context

Bonded labor in agricultural economies is an ancient economic institution which is still observed in parts of the developing world. This institution chiefly focuses on poor workers indebted to their employer. They pay their debt through long-term servitude with limited compensation, often under harsh working conditions. Bonded labor arrangements show a decreasing global trend (Ray 1998:505), but in 1998 the United Nations Working Group on Contemporary Forms of Slavery estimated that some 20 million people worldwide were still engaged in labor practices involving debt bondage (UN 1998). In 2005, the International Labor Organization (ILO) estimated that at least 12.3 million people could be characterized as unfree labor (ILO 2005). This estimate is far from flawless, as a precise definition of bonded labor has not been universally agreed. Bonded labor is recognized by the UN as a contemporary form of slavery, alongside trafficking and sexual slavery.

Bonded labor in the agricultural sector is considered to be especially common in South Asia, particularly in Pakistan, India, Bangladesh and Nepal. While these countries officially recognize that bonded labor is still in practise, its magnitude is disputed. Typically, estimates made by non-governmental organizations (NGOs) tend to exceed those provided by the governments. For example, Human Rights Watch claimed there were over 40 million bonded laborers in India in 1999. The government of India claimed that only 251,000 bonded laborers had been identified and that 231,000 of them had been rehabilitated (Anti-Slavery International 2001).

Today, the international community condemns slavery and labor practices similar to slavery, including bonded labor. This is clearly seen in conventions prohibiting bonded labor, such as the League of Nations Slavery Convention (1927),[1] the United Nations Universal Declaration of Human Rights (1948) and the UN Supplementary Convention on the Abolition of Slavery, the Slave Trade, and Institutions and Practices Similar to Slavery (1956),[2] to mention a few. India, Pakistan and Nepal (2000) have all signed these conventions, and have also passed

[1] This convention defined slavery as “the status or condition of a person over whom any or all of the powers of the right of ownership are exercised” (Article 1.1).
[2] In this convention bonded labor is defined as “the status or condition arising from a pledge by a debtor of his personal services or of those of a person under his control as security for a debt, if the value of those services as

national legislation to combat bonded labor, in 1976, 1992 and 2000, respectively. Despite the legislation, debt-bonded labor has proven to be a persistent problem in these countries. This is partly due to insufficient implementation of these laws. However, there are several other reasons why debt-bonded labor is still prevalent, and these reasons will be discussed later in this thesis.

1.2 Bonded Labor in Nepal

The background for this thesis is the recent interventions that have been put into action to eliminate the problem of debt-bonded labor in Nepal. Following the introduction of democracy in Nepal in 1990, debt-bonded labor practises received increased attention (Rankin 1999:27). Nepalese NGOs started to report that labor institutions in rural districts clearly violated the legal standards Nepal was obliged to meet. Nepal has signed both the Slavery Convention of 1926 and the Human Rights Declaration. The constitution of 1990 also has elements that can be used to argue against debt-bonded labor.

In 1992, the Nepalese human rights organization Informal Sector Service Centre (INSEC) reported that debt-bonded labor was especially prevalent in the southwestern part of the country. These laborers were called *kamaiyas* and in 1995 the official estimate by the government was that there were 15,152 *kamaiya* households (Sharma & Sharma 2003:1). INSEC's estimate was higher.

The *kamaiya* issue gathered considerable publicity during the 1990s and many NGOs, international non-governmental organizations (INGOs) and trade unions lobbied for its abolishment. On 17 July 2000, His Majesty's Government of Nepal, through its cabinet, made a surprise move and declared the liberation of the *kamaiyas.*[3] In practical terms, this meant that *kamaiya* laborers were no longer obliged to pay their debt and that the contract with their landlord was automatically cancelled. It also involved a punishment of 3-10 years for landlords who employed *kamaiyas*.

Relief programs targeted at former *kamaiyas* were initiated by NGOs, INGOs and trade unions. These programs focused on the construction of temporary huts, the provision of food,

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reasonably assessed is not applied towards the liquidation of the debt or the length and nature of those services are not respectively limited and defined" (Article 1.a).

[3] The Katmandu Post, 18 July 2000.

water, clothes and healthcare and the schooling of the children. The authorities started a process to identify former *kamaiyas* and allocate small land plots to them. However, the implementation of land reform has been slow and there are large variations in how much land ex-*kamaiyas* have received. Some *kamaiyas* are still waiting in temporary camps for the government's promise of land.

After the ban, the *kamaiyas* were no longer obliged to pay their debts to their landlords and could leave the landlord if they wanted. Many left the landlord immediately while some started to serve the same landlord under different contractual agreements. However, there are still a few *kamaiyas* today. More details about this situation will be given in Chapter 4, where findings from the fieldwork in the districts of Western Terai are presented.

The declaration of freedom for *kamaiyas* made by the government in 2000 was formalized two years later under a new law, the so-called *Kamaiya* Labor (Prohibition) Act. This law defines bonded labor as follows:

> *Kamaiya* Labor means the labor or service to be provided by a person to his creditor without any wages or at low rates of wages for the following reasons:
> (1) To repay loans obtained by him or any member of his family, or to pay interest thereon.
> (2) To repay loans obtained by his ancestors, or to pay interest thereon.
> (3) To repay the *Kamaiya* loans of a *Kamaiya* laborer for whom he had provided surety to the creditor.[4]

The definition of bonded labor used here has been criticized for being too group-specific. Debt-bonded labor relationships exist under many names in Nepal, and this definition does not cover the problem in all its forms. Furthermore, the definition emphasizes low rates of wages as an important characteristic of a debt-bonded labor relationship, but the term "low wages" is imprecise and may be disputed. I present other definitions of debt-bonded labor relations in section 1.4.

[4] *Kamaiya* Labor (Prohibition) Act, Chapter 1.2 Definitions.

1.3 Labor Contracts in the Agricultural Sector

What makes debt-bonded labor contracts unique compared to other labor contracts and why is debt-bonded labor criticized? To answer these questions, it is useful to consider a more general description of labor contracts in an agricultural setting. When land is unequally distributed within the population, there is a potential for a labor market and for a market for the rental of land (Ray 1998:412). Farmers with more land than they are able to cultivate themselves will hire extra labor, whereas laborers with no land may sell their labor capacity in exchange for money or other kinds of benefit. The labor arrangements that evolve may be classified according to two different criteria.

The first criterion relates to the length of time a laborer is restricted to working for one employer only, in other words, the duration of the contractual agreement. A laborer can be hired on a casual basis, typically for a day, receiving wages on a day-to-day basis. Other labor relationships may last for one season or for several years. At the other extreme of the scale are lifelong relationships. Long-term labor relations are also often referred to as attached, tied or permanent labor.

The second criterion relates to whether the landlord and the laborer operate in one or several markets simultaneously. For example, an employer may offer his worker a wage and consumption credit in a combined contract, interlinking the labor market with the credit market. Such contracts are called interlinked contracts. Other markets that may be linked are the markets for insurance and for renting land.

By pairing the different options by these two criteria, we may classify a number of different contractual agreements. In Nepal, we typically observe four types of contractual agreement. The first two are casual labor and long-term labor contracts. In these two contracts, the landowner is the entrepreneur who hires labor according to his needs. In the two other contracts, the landowner chooses to hand over the responsibility for cultivating the land to a tenant. The landlord may opt for a fixed-rent tenancy, receiving a fixed amount for allowing the tenant to cultivate the land. The other option available is sharecropping, where the tenant does all the work but the outputs, and often the costs, are shared between the tenant and the landlord according to a fixed proportion, often 50%. Both of the two latter contracts combine

the market for labor and for land. Sen (1975:62) provides a classification of labor contracts (Fig. 1.1).

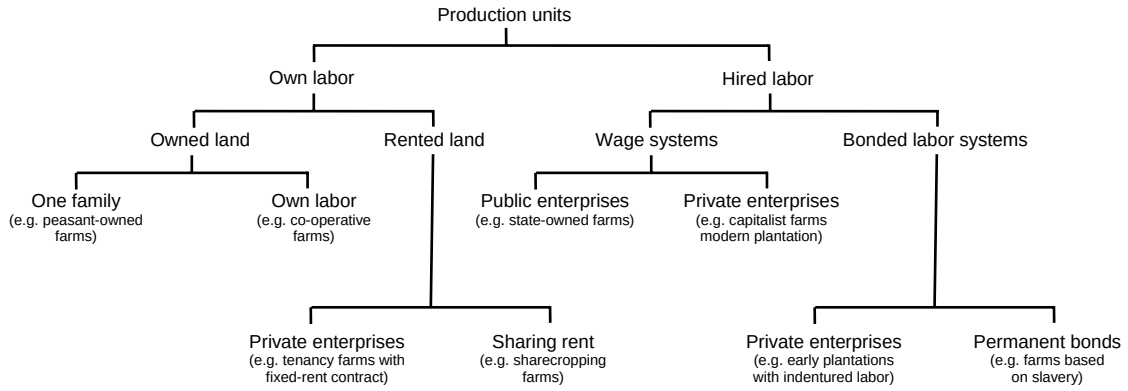

Figure 1.1. Classification of agricultural contracts and farm types. Source: Sen (1975:62)

Permanent or long-term labor contracts frequently include transactions in the market for credit or insurance in addition to the market for land and labor. A permanent worker may, for instance, receive loans for consumption or investment purposes from his landlord. An obvious advantage of such arrangements is that it reduces the risk of strategic default. Credit transactions are easier to enforce when the landlord and the laborer have a long-standing working relationship (Ray 1998:561).

1.4 Definitions of Debt-bonded Labor

A common understanding of debt-bonded labor is a laborer who agrees to work for the same employer for a long period in exchange for a loan in kind or in cash (Breman 1974:8). The reason for the loan may be a sudden expense, such as at time of marriage, medical emergency or food shortage. The worker has to work for the same landlord until the debt is paid off, which is usually unrealistic because the remuneration is too low. As the debt accumulates over time, the laborer remains attached to the landlord in lifelong servitude. The debt may even be passed on to the next generation. Srinivasan's definition of bonded labor summarizes these ideas in a precise way (Srinivasan 1989:203):

> A 'bonded' labor contract was defined as one in which the landlord provides consumption credit to the sharecropper in return for the latter agreeing to provide labor services (at less than his opportunity cost) to the landlord in the event that the

(random) output is inadequate to repay the amount borrowed with accumulated interest.

Several comments may be made about this definition. Debt-bonded labor is different from forced labor and slavery. Slavery implies the use of force or coercion to maintain the relationship. A slave is the property of his master and is not entitled to make his own choices. Unlike forced labor, bonded labor is ex-ante voluntary (Genicot 2002:102). Strictly speaking, the decision to enter a debt-bonded labor relationship is based on free choice. In most cases, the relationship may be ended by repaying the debt. Accepting this view, it is reasonable to assume that the worker's choice of debt bondage is the optimal choice within his set of options. If we assume that the laborer is rational and able to make a choice voluntarily, he chooses what is optimal for him. Thus, if he chooses debt bondage, it is because this option is better than his other alternatives according to the argument of revealed preferences. The fact that the laborer chooses a contract on very bad terms indicates that the other alternatives he has are just as bad or worse.

However, Srinivasan's definition states that the value of the worker's labor supply exceeds that of his alternative cost. In other words, the worker would have increased his utility if he had used his working capacity in a different way, but he still chose not to do so. There are at least five reasons that may explain this behavior.

First, Srinivasan's definition implies that the contract is preferred because the landlord offers consumption credit. This aspect of the contract represents a utility gain for the worker because it implicitly provides insurance against starvation. On the other hand, the worker pays a premium to avoid this risk and that is why the wage the bonded laborer receives is less than his opportunity cost.

Second, a laborer is usually free to leave the landlord if he pays the debt to the landlord. However, the landlord may take advantage of the illiteracy among the bonded laborers and manipulate the debt upwards (Villanger 2006:35; Rankin 1999:36). The increased debt size makes it impossible for the worker to repay the debt and he is trapped into continuing to serve the same landlord.

Third, Srinivasan (1989:203-4) describes how an agricultural worker may get consumption credit from two sources. Either he may borrow from a formal credit institution or he may obtain consumption credit through a bonded labor contract. Now, let us say that the worker is unable to repay his debts. According to Srinivasan, the formal credit institutions will expropriate the worker's income and deny him future access to credit. Under a bonded labor contract, however, the landlord will not deny him renewal of loans in the future because the worker may repay the debt and interest through the labor services offered to the landlord. Thus, the guaranteed access to future credit through a landlord may explain why a bonded laborer voluntarily chooses to offer his labor services for less than his reservation utility. Through the bonded labor contract the worker is assured access to credit.

Fourth, the landlord may have the ability to exercise power to limit the number of choices available to the worker, or even force the laborer to accept an offer he otherwise would not have chosen voluntarily. The type of power in this context is of a more subtle character than the physical violence observed in slavery. For example, if the landlord is a powerful person in the community, he may sanction the laborer financially through a third party (Basu 1986:268). If the laborer does not accept the contract, the landlord may, for instance, use a merchant under his control to sanction the laborer. Thus, the relationship is a voluntary one only on the surface. In reality, indirect threats restrict other options for the worker.

Fifth, there is another reason that is often considered peripheral in conventional economics. The worker may choose debt bondage as it is a part of his tradition and family culture, in spite of the fact that better options are available. What used to be a rational and optimal choice in the past may no longer be the most favorable one as the structural characteristics of the economy change (Chenery & Srinivasan 1991:100). It may take some time before the agents adapt to a new environment. During this period of transition, a worker may choose to stay bonded even if he could be better off doing something else. One might consider this a form of "lagged" rationality. How long this period of transition will take is, of course, difficult to estimate. However, it is likely that laborers living on the edge of subsistence will be conservative and need a longer time to change due to their vulnerable position. If one of the outcomes might be starvation, it would be natural to be reluctant to try new forms of labor contract.

To sum up, bonded labor must be distinguished from slavery, as it is an ex ante voluntary contract. Poverty forces the laborer to accept bad contractual terms in exchange for security against starvation. A laborer may choose a bonded labor contract as it provides access to credit. Manipulation of the debt upwards by the landlords may occur. Powerful employers may also have subtle means of diminishing other options for the laborer, and thereby force him to accept debt bondage. Tradition and culture may put pressure on the laborers to choose debt bondage.

1.5 Research Objective and Organization of the Thesis

The overall aim of this thesis is to evaluate whether the living conditions of the *kamaiyas* have improved after *kamaiya* contracts were forbidden in 2000. To answer this question, a set of questions has to be answered: 1. What characterizes the *kamaiya* labor contract and why is it chosen by the *kamaiyas*? 2. Has the number of *kamaiya* laborers been reduced since 2000? 3. If the number of *kamaiyas* has been reduced, what contracts have replaced the *kamaiya* contract? 4. How do former *kamaiyas* see their new life compared to their former life as *kamaiya* laborers? These questions will be examined by analyzing qualitative and quantitative data from a field survey in Western Terai in 2005.

This thesis is organized as follows. Chapter 2 introduces several theoretical explanations for bonded labor institutions. Theoretical predictions from these theories will be derived. Chapter 3 explains the methodology followed in the field study carried out in Nepal in 2005 and discusses the methodology's strengths and weaknesses. Chapter 4 presents empirical data from the southwestern part of Nepal gathered in February and March 2005. Chapter 5 discusses whether the empirical data support or reject the theoretical predictions derived from Chapter 2. Chapter 6 suggests different policy implications and chapter 7 concludes the thesis.

Chokat Tharu – The Story of a Former *Kamaiya* Laborer

Chokat Tharu is typical of former *kamaiya* laborers we met in the course of our fieldwork. He became a *kamaiya* laborer when he was 9 years old and worked as a *kamaiya* for 22 years. During those years, he served at least 15 different landlords, no more than 4 years for each landlord. The maximum loan he had amounted to 10,000 Nepalese rupees, equivalent to approximately £80. When he changed landlords, he would pay off the outstanding debt to his present landlord using a loan from his new landlord.

The last landlord he served paid him 5,000 rupees annually. The landlord he served before that gave him 720 kg of paddy per year and also gave him the right to cultivate 10 kattha[6] land, from which he could keep all the crop for himself and his family. The landlord let the *kamaiya* family live in a small house on the farm. He also provided meals, but only for the kamaiya worker, not for his wife and children. Chokat's wife worked as a shepherd and did domestic work for the landlord. She had also taken up work at other places to supplement the household income. However, she could only do that when she had completed her work for the landlord. The children in the *kamaiya* household worked for other landlords.

Their loan from the last landlord was 500 rupees, and the landlord arranged for them not to pay any interest. Chokat worked every day, usually from 4-5 in the morning until 6-7 in the evening. He recalls that the landlord was very strict when it came to his whereabouts. The landlord would worry when he was far away from the farm. Sometimes the landlord would beat him and use harsh words.

Chokat stopped being a *kamaiya* because, in his own words, he was "freed" in July 2000. In the beginning, he did not know this and the landlord came and told him. The landlord said he was free from that day on and did not have to give him anything in return The landlord also promised to give him a buffalo, but never did so. Chokat actually wanted to stay with the landlord because he did not have any house to go to. The landlord refused because he risked a penalty if he continued to employ *kamaiyas*. The family then moved to the nearby city of Mahendranagar in Suda and rented a room there. They managed to survive on casual work.

The president of the District Administration Office suggested that he should go to the settlement camp for ex-*kamaiyas,* where he is now. A friend assured him: "They will give you land, go there quickly." The government allocated 5 kattha of land to him and he built a house for himself and his family. He was not asked to apply for this land. He thinks some leader made one application for all.

He thinks that if it were legal to sign *kamaiya* contracts today, he might not choose this type of contract. As a *kamaiya*, he worked in the house of other people. Now he works in his own house. His life as a *kamaiya* was very busy. Now he has more time to wash his body and his clothes. However, as a *kamaiya* he did not have any problems getting enough food. He thinks life is a little better now, but it is difficult to get enough food. And "sometimes," he adds, "angry elephants come from the jungle and damage my house."

[5] 5 kattha = 135 x 135 square feet = 0.17 ha.

2. Bonded Labor and Economic Theory

2.1 Free or Unfree Bonded Laborer?

Theoretical explanations of permanent labor contracts may be divided into two categories. One school, often referred to as the unfree or semi-feudal school, argues that the landlord uses bondage or coercion to exploit the laborer and to extract maximum surplus. The laborer is in a weak bargaining position and cannot in practise reject the conditions and wage offered by the employer (Thorner 1957:21). Compulsion and custom ties the laborer to his master. He may only seek alternative employment after receiving permission from his employer. Repayment of his debt might set him free from the relationship, but this is very unlikely to happen due to the low wage he receives.

This perspective has been challenged over recent decades by theorists who reject the view that peasants are deterministically governed by culture and traditional institutions (Chenery & Srinivasan 1991:97 and 100-1; Shultz 1964:37; Stiglitz 1988:99-104). According to this body of literature, a peasant is a rational economical agent who maximizes his utility. Contractual agreements like bonded labor are an outcome of decisions made by rational agents who mutually benefit from the agreements. The institutions that arise are responses to imperfect information, transaction costs, and incomplete or non-existing markets, for example credit and insurance markets. The formation of institutions must be viewed as endogenous and therefore explained. The choices made by agents in this context are viewed as voluntary, as opposed to involuntary or irrational in the semi-feudal school. This school is labeled the free or neoclassical school. Typical outcomes observed by this school are institutions that interlink several markets, for example a labor contract that also includes provision of credit.

This chapter is organized as follows. Section 2.2 discusses theoretical perspectives supporting the semi-feudal perspective on bonded labor and elaborates on debt traps and patron-client theory. Section 2.3 demonstrates how neoclassical economics may explain the choice of bonded labor contracts. For example, a worker may voluntarily choose this type of contract as the contract smooths his income and he implicitly obtains insurance against unemployment in a risky labor market. I also present a model where different contracts are used by the employers as a screening device to find out which laborers have high entrepreneurial ability. Finally, I examine how unequal distribution of land may enable a powerful landowner to

behave as a monopsonist and create downward pressure on wages. Section 2.4 derives implications and hypotheses from the previous theoretical section.

2.2 The Semi-Feudal Perspective on Bonded Labor Institutions

2.2.1 Deliberately Designed Debt Traps

The semi-feudal view claims that bonded labor institutions are designed to exploit workers, that is, to maximize surplus for the landlord. One spokesman for the semi-feudal school is Bhaduri (1973). In his model, the landlord gets income from renting out his property to a tenant. The landlord also offers consumption loans to the tenant and thus also extracts income from the tenant through high interest rates. The tenant's income is not sufficient to meet his subsistence needs and thus he continually needs new loans from the landlord to survive. In this model, Bhaduri questions whether the interaction between the landlord and the worker may be interpreted as a voluntary market transaction where both parties gain from the exchange. It is more realistic to see this as a system in which the tenant is caught into a debt trap which the landlord uses to exploit the tenant and extract income from him. Bhaduri also suggests that this model may explain the lack of technological innovation in agricultural sector. If the landlord chooses to innovate by, for example, making agricultural production more capital intensive, the tenant's income is likely to increase. The need for consumption loans may then decrease and the tenant may be able to escape from the debt trap. This is surely not in the interest of the landlord, and he reasons that his potential for surplus extraction is higher when no innovation takes place (Basu 1997:228).

Bhaduri's model has been criticized by Newbery (1975), who argues that the peasant may easily free himself from the debt trap. This is based on the assumption that the landlord does not use other coercive means to make sure that the tenant does not escape the debt trap. Newbery shows that by saving only a small amount in one year the peasant may easily escape the debt trap. We may then conclude that the tenant is very short-sighted since he does not prefer to save in one period. Another explanation for why the peasant remains in bondage is that the model has left out some essential factors. Following the reasoning of Basu (1997:236), options for alternative employment for the tenant are limited due to scarcity of jobs. If the landlord realizes that the laborer is about to free himself, the landlord may simply adjust the interest rates or the wage slightly so that the laborer's debt again increases and the aspirations for freedom are diminished. From past experience the worker may be aware of this

manoeuvre by the landlord and sees no point in making an effort to free himself from bondage. In fact, the laborer may even see no realistic opportunity to ever repay his debt and may thus aim to increase his debt as much as possible. Breman (1974:59-60) observed this in his field study. Debt may be viewed as a form of income. When the debt will never be paid anyway, why not get as much debt as possible? The next section shows how the relationship between the landlord and the tenant can be governed by social structures that maintain an exploitative relationship.

2.2.2 Bonded Labor and Patron-Client Relations

The relationship between a landlord and a bonded laborer may be explained by patron-client theory. This theory states that the relationship between, for example, peasant and landlord may be governed by a rationale other than the purely economic exchange of equivalents, as we observe in markets. There may be an exchange of goods of more symbolic character, such as honor, respect and protection.

A patron-client relationship describes an exchange between two parties who are unequal in endowment of resources (Meyer 2002:17). The underlying principle that structures the relationship is that a gift from one of the parties creates an emotional expectation to give something in return. By giving a gift, the giver creates an emotional debt on the part of the receiver. A gift disturbs the balance between the two, and the relationship can only become balanced again if a gift of the same value is returned. Suppose the receiver is not able to return a gift of the same value, which in our context could be a poor peasant who due to poverty is not able to return a gift from the landlord and thus becomes indebted to him. This gives the landlord power over the peasant and his power is not based on violence but rather on emotional indebtedness (Meyer 2002:15-6). Typically, the patron is able to offer goods, for example insurance and protection, while the client gives in return his labor and owes the patron his loyalty and support.

Bourdieu (1998:96) characterizes patron-client relations as an economy of symbolic goods. In contrast to a market exchange, the exact value of symbolic goods is not expressed explicitly. In fact, to reveal the exact value is taboo, just as we remove price tags when we give presents to friends. The real truth of an exploitative labor relationship, that is, the exact value of the exchange, which can be very beneficial for the stronger party, is hidden and not spoken of. However, the master will only be able to maintain his position as an exploiter if he has virtues

that match his status. He must show generosity and dignity and treat his clients with respect (Bourdieu 1993:190-1). Or to use Bourdieu's own words:

> And to become attached in this manner, the relation of domination and exploitation must be enchanted in such a way as to transform it into a domestic relationship of familiarity through a continuous series of acts capable of symbolically transfiguring it through euphemization (taking care of his son, marrying off his daughter, giving him presents, etc.) (Bourdieu 1998:101).

The exploitative character of the relationship is repressed because it is taboo to calculate the true value of the exchanges that take place. As a consequence, the relationship may become self-evident and natural for both parties. Bourdieu calls this for doxa:

> …that which is beyond question and which each agent tacitly accords by the mere fact of acting in accord with social convention… (Bourdieu 1993:169).

The labor relation becomes a silent tradition that no one questions. Bourdieu thus seriously challenges the standard assumptions about rational economical agents. Instead of active evaluation of the pros and cons of available options, the agent makes choices passively influenced by social structures, such as tradition. They may not be fully conscious of the choices they make. They are rather guided by a:

> …feel for the game: the player, having deeply internalized the regularities of a game, does what he must do at the moment it is necessary, without needing to ask explicitly what is to be done (Bourdieu 1998:98).

2.2.3 Decision Making as Rule Following

Bourdieu's perspective on making decisions shares many characteristics with what March (1994:57-102) describes as "decision making as rule following". However, in contrast to Bourdieu, the decision maker here is much more active in the decision process. According to March's concept, a person faced with a problem does not evaluate different options and consequences and choose the option which is best according to his preferences, which is the familiar rational decision making process. The decision maker is guided by what March calls "the logic of appropriateness". This requires the decision maker to answer three questions.

First, the question of *recognition*, what kind of situation is this? Second, the question of *identity*, what sort of person is he? Third, the question of *rules*, what should a person like himself do in a situation like this? Answering these questions is not an arbitrary process but demands careful reasoning by the decision maker. To be guided by the logic of appropriateness implies that the decision maker must recognize the right situation and match an appropriate action according to his identity. Hence, an essential question is how the identity of the decision maker is constructed. March suggests that identities can be created through socialization where individuals are taught to behave in certain ways in response to certain situations to fulfil cultural expectations. Identities and appropriate behavior in specific situations can be taught through, for instance, education, the legal system or religion. Individuals also adopt an identity and rules of behavior from social groups they identify themselves with, such as families, religious groups, castes and age groups.

This alternative model of decision making provides different predictions for what will change a decision maker's behavior. According to rational decision making, the decision maker will choose a different option if that particular option for some reason appears more attractive in terms of utility compared to other options. Within the framework of rule following, many other factors may explain a change of behavior. For example, if the decision maker perceives the situation differently, he may apply a different rule to that particular situation. Similarly, if the decision maker develops a new identity or changes the rules he applies to the situation, his behavior might change as well. Hence, according to this framework behavior may change for different reasons than under strict rational decision making.

The concept of decision making as rule following may be relevant to understand the decision made by workers to become bonded laborers. A bonded laborer may develop an identity where he sees himself as a bonded laborer. Having this identity, which may have been developed through socialization or by observing people who are similar to him, he believes that becoming a bonded laborer is an appropriate response to his economic conditions. If this is a correct understanding of his mindset, it has important policy implications regarding how the number of bonded laborers can be reduced. To make bonded laborers change behavior, one has to change their identity and teach them other ways to respond to the situations they face. Hence, awareness campaigns and education of bonded laborers may be more effective policy instruments for reducing the number of bonded laborers, according to this theory.

2.2.4 Strategic alliances

James Scott (1976:4-5) claims that the safety first principle is the underlying basis for survival strategies amongst peasants in Southeast Asia. The peasant chooses to minimize risk rather than take a chance and maximize average return. Scott also suggests that the peasant forms strategic alliances outside the family to reduce risk. By binding himself to a powerful agent, such as a powerful landlord, he will secure a food supply for his household. The peasant relies on what Scott calls a "subsistence ethic", which holds that the rural elite has an obligation to care for the poor peasant in times of famine and food shortage. The content of this moral claim may also include loan provision, guarantee of employment and health services. In contrast, a casual laborer is not entitled to put forward these claims (Scott 1976:179), as the relationship between the two parties is simply an exchange of labor time compensated by wage. In fact, Scott claims that the peasant will choose labor institutions that guarantee a subsistence minimum even though the landlord may require most of his time:

> A tenure system which provides the tenant with a minimal guaranteed return is more likely to be experienced as less exploitative than a system which, while it may take less from him on the average, does not rate his needs as a consumer (Scott 1976:7).

Of course, the rural elite expects something in return for providing these goods. The peasant is obliged to serve the powerful agent as a loyal servant and give political support when it is needed (Scott 1976:28).

2.3 Neoclassical Explanations of Bonded Labor Institutions

2.3.1 Factors Influencing the Formation of Labor Institutions

In contrast to the semi-feudal or the unfree perspective, the role of coercion and tradition is downplayed in neoclassical explanations of bonded labor institutions. This school sees labor institutions as voluntary agreements between rational agents that maximize their utility given their endowment of resources and their reservation utility.[6] The labor institutions that exist are thus responses to challenges faced by the tenant and the landlord when making contracts

[6] It is possible to argue that a bonded labor maximizes his utility both according to Bourdieu's, Scott's and March's perspective. However, the laborer's utility is not here entirely derived from traditional economic variables. The worker might also receive utility from following a tradition, or to put it differently, the disutility of violating the tradition is high. The worker may also receive utility from following a rule (March) or by forming strategic alliances (Scott).

related to agricultural production in a rural setting. Three factors are particularly important to understanding the mechanisms that shape labor institutions in the rural sector of developing countries. First, agricultural production takes place in a *risky environment* with an absence of formal insurance and credit markets (Chenery & Srinivasan 1991:115). Second, there is a considerable risk of *moral hazard* in labor contracts (Ray 1998:448-9). Third, an agricultural worker's true ability to work is hidden information for the employer and therefore there is a risk of *adverse selection* (Ray 1998:405). In the following section I will elaborate on how all these three factors might affect the formation of labor institutions.

Coping with a Risky Environment

The output of agricultural production depends on many factors, some of them random and outside the control of both the agricultural workers and the landlord, for example weather. This is especially problematic for a risk averse agricultural worker who may run into financial problems if the harvest fails. Even though he may have enough income on average over time to survive, he may not have sufficient savings to draw upon when an economic shock occurs. In addition, the worker's employment situation is also exposed to risk. Typically, there is a peak season with plenty of work for all workers and a lean season where it is difficult to find work (Ray 1998:515). Non-agricultural casual work might be a solution in the lean season, but to find sufficient casual work of this type is a challenge. Therefore, agricultural workers both face a risky employment situation and find that their revenue from agriculture is volatile and unstable, making it hard for them to obtain a reliable income over time. The strategies used to cope with risks of this sort are usually divided into two categories, so-called *ex-ante* and *ex-post* risk reducing mechanisms (See Dercon 2002:143-5).

Ex-post strategies deal with the consequences of economic shocks. By engaging in an insurance scheme a household is entitled to compensation and thereby to obtain a secure fixed level of consumption even if an economic crisis emerges. Formal insurance schemes rarely exist in the rural sector of developing countries, but there are examples of informal schemes (see Udry 1994). *Ex-post* strategies can also involve the use of accumulated wealth, for instance, cattle or jewelery that can be sold in case of an emergency.

Ex-ante strategies, on the other hand, seek to reduce the risk faced by a household, for example by changing the household's activities towards activities with low variance or by diversifying its income sources by choosing many activities with low covariance. Choosing

crops more robust to harsh weather conditions is an example of the former strategy, whereas diversification of crops, migration of some of the household members and employment in the non-agricultural sector are examples of the latter. The advantage of these strategies is that they reduce the probability of ending up in an emergency. Unfortunately, these strategies may imply a cost as the most profitable activities are avoided due to their relatively high risk.

Agrarian labor institutions might be devices for the agricultural worker to smooth consumption or insure against economic shocks or both. The insurance and consumption smoothing components in these institutions will typically not be expressed explicitly (Alderman & Paxson 1992:2). Bonded labor arrangements seem to involve elements of both insurance and consumption smoothing.

The Problem of Unobserved Actions

A labor contract implies that a laborer does a job on behalf of the employer. Doing the job successfully usually depends on how much effort the worker puts into it. Ideally, the worker should be paid according to how much effort he contributes. However, in practice it is difficult to verify whether the worker has actually contributed the level of effort that he promised in the labor contract. In fact, a worker receiving a fixed income has an incentive not to contribute unobserved effort as he gets the same remuneration anyway. The employer cannot detect that the worker has not contributed with the unobserved action. This is the essence of moral hazard. To some extent, the landlord may reduce the problem by monitoring the worker, but that involves costs to the employer.

Another solution to reducing the problem of moral hazard is to use the result of the work as an indicator of how much effort the laborer put in. However, this is problematic since the job's success or failure may depend on other factors outside the control of the worker. There is not necessarily a direct link between effort and successful results from work. We shall see how the challenge of moral hazard may shape the design of labor contracts.

Private Information on Laborer's Abilities

Workers might differ in their ability to perform a job for an employer. This information is private information for the worker and in principle unobservable by the employer, although the worker may send signals that reveal this information to the employer. The employer

obviously wants to hire those with good skills, but the employer can only guess who they are. In section 2.3.5 I demonstrate how an employer may solve this problem by screening the workers through offering them a menu of contracts and observing their choice of contract.

2.3.2 Principal-Agent Theory and Labor Contracts

In the principal-agent framework, an economically powerful principal hires and compensates an agent to perform a certain task. As the agent's goals may deviate from the principal's, this theory aims to identify contractual agreements and incentive structures that align the actions of the agent to the aims of the principal (Ray 1998:456). This theory is useful for analyzing the economic interactions between a landlord (the principal) and an agricultural worker (the agent). The worker is given the job of cultivating the land for the landlord and is compensated for this by the landlord. The landlord has control over a scarce resource, in this case land, giving him to some extent monopoly power which makes him capable of making the tenant take-it-or-leave-it offers. However, the terms offered by the landlord have to fulfil two requirements. First, the tenant may choose to devote his time to other activities, that is, his outside options, which provide him with a reservation utility. Thus, the terms offered to him must give him at least as much utility as his outside options. This is referred to as the *participation constraint.* If this constraint is not met, the tenant will not accept the contract. Secondly, the success of the work depends on the tenant's provision of effort in performing the job. These are, however, hidden actions which are unobservable by the landlord. The landlord must design contract terms that ensure that the tenant has an incentive to contribute unobserved effort. This is called the *incentive constraint.*

The First Best Contract (Effort is Contractable or Observable)

We now move on to derive the optimal contract terms under different assumptions. Let us say that the landlord can observe the tenant's contribution of effort without any cost. In other words, there are no hidden actions and thus *symmetric information*. The level of effort can be specified in the contract terms, and the landlord designs a contract that maximizes his return given that tenant's participation constraint is met. Since effort can be perfectly observed there is no need to take into account the incentive constraint as the tenant will be immediately detected if he does not contribute the effort specified in the contract. Output (Q) of the land is a direct function of effort, $Q(e) = e$.[7] Effort is costly for the tenant and given by the function $c(e) = ce^2/2$, where $c'(e) = ce > 0$ and $c''(e) = c > 0$. The effort that maximizes social surplus

is found by solving the following maximization problem *Max* $(e - ce^2/2)$ with respect to *e*. The first order condition is $1 - ce = 0$, which implies that the optimal effort is $e^* = 1/c$. The cost of supplying this effort is $(1/2)c(1/c)^2 = 1/(2c)$. If the landlord wants to implement e^* he must pay the worker a wage *w* so that the worker's participation constraint is met. This implies that the wage the worker receives less the worker's cost of supplying this effort must at least be as good as his reservation utility ($\underline{u}$); formally this implies that $we^* - 1/(2c) = \underline{u}$. If this participation constraint is not met, there will be no "trade" between the landlord and the worker. The implication of this analysis is that if the tenant's reservation utility increases he must receive a higher wage, otherwise the participation constraint does not hold.

The analysis above is unrealistic as the output is directly linked to effort. It is more realistic to assume that the output depends on effort and a random component, unrelated to the tenant's effort (e.g. weather). Ray (1998:465-473) develops a model that captures this aspect. We continue to assume that effort is costless to observe. The level of output *Q* is random and can take two levels, high (H) or low (L), and the tenant may choose between two different levels of effort (e), $e = 0$ and $e = 1$, where the higher level of effort has a cost of E to the tenant. Given a low level of effort the probability for high output equals *q*. The probability of high output is *p* if the tenant provides high effort. We assume that $p > q$. We also assume that the tenant is risk averse and the landlord risk neutral. We also assume that high effort from the tenant maximizes expected surplus, hence high effort is pareto optimal. This implies that $pH + (1-p)L - E > qH + (1-q)L$. Since effort is contractable the landlord may specify the desired effort level from the tenant, and, given the assumption above, he chooses a contract that involves a high effort level as this maximizes his expected return. He offers the tenant a fixed wage $\underline{w}$ where $U(\underline{w}) = \underline{u} + E$ to compensate the tenant for providing high effort.

The landlord, being risk neutral, has an incentive to give the tenant a fixed wage $\underline{w}$ that provides the tenant utility exactly equal to the reservation utility, no matter whether the output is high or low. Why is this so? Let us say that the landlord offered a high wage w_1 in case of high output and a low wage w_2 in case of low output. The landlord still has to meet the participation constraint and the expected utility of the two wage levels cannot be less than the tenant's reservation utility. A profit maximizing landlord will choose wage levels so that the

[7] This model is from Ghatak (2006).

participation constraint holds with equality; $pU(w_1) + (1-p)U(w_2) = \underline{u}$. The expected wage is $w^e = pw_1 + (1-p)w_2$. Since the tenant is risk averse and has a concave utility function, the utility of the expected wage is higher than the expected utility of the two different wage levels, which means that $U(w^e) > pU(w_1) + (1-p)U(w_2)$. Thus, the landlord can reduce the wage until the participation constraint holds with equality, $U(\underline{w}) = pU(w_1) + (1-p)U(w_2)$. It is common to refer to this wage as the certainty equivalent.

In essence, what the landlord does is to extract an insurance premium for giving the tenant a fixed wage that does not depend on the contingent output. The landlord also assumes all the risk himself. Due to different risk preferences, they can both become better off if they "trade" risk between themselves through the labor contract. This serves as an explanation for why we observe some laborers enter into long-term labor contracts. To avoid a risky income, the tenant accepts a fixed but lower income. The level of the insurance premium the landlord can extract increases as the variance of the risky income for the tenant increases and also if the tenant becomes more risk averse, that is, his utility function becomes more curved.[8]

A potential for trading in risk exists when two parties have different attitudes towards risk. It is common to assume in this literature that a wealthy landowner is risk neutral and the peasant risk averse. The theoretical prediction for optimal contract terms when the landlord is risk avers and the tenant is risk neutral is a rental contract under which the laborer pays a fixed amount to the landlord (Dasgupta, Knight & Love 1999:155-9). When both parties are risk averse, the optimal contact is that both parties receive a share of the output. Sharecropping, where both parties receive an equal share of output, is a typical version of this contract.

It is common to assume that a person's risk aversion decreases when he acquires more wealth (Varian 1992:189). Accepting this view, we should expect that poorer people are more risk averse and that the landlord is thus able to extract a higher insurance premium from poorer tenants. An implication is that we should expect more long-term labor contracts among poorer people. Land is the most important productive asset in an agricultural economy. Endowment in land is an important indicator of a person's economic status. Thus, we should expect that landless people have a tendency to enter long-term labor contracts.

[8] See Appendix A.1 to chapter 2 for a calculation of insurance premiums for different risk preferences and different variances. The risk premium increases in variance and in risk aversion.

The first best solution rests on the assumption that effort is costless to monitor or that there is no room for hidden action by the tenant. These assumptions are not particularly realistic. If the tenant enters a fixed pay contract with a landlord, the landlord has to monitor the tenant and make sure that he puts in the amount of effort that they agreed on in the contract. Monitoring and enforcement of the contract obviously represents a cost to the landlord. Note also that the tenant receives a fixed wage, which gives him few incentives for being a diligent worker as he gets the same payment irrespective of his level of effort. The way the labor contract is designed does not motivate the tenant to put in effort and, hence, the risk of moral hazard is high. This aspect of the contract is likely to make the long-term contract less profitable for the landlord as monitoring and enforcement costs will increase.

The costs of monitoring may be reduced if the tenant and landlord work closely together, making it easy for the landlord to observe the tenant's work performance. Many of the mechanisms in the patron-client relationships described in section 2.2.2 may be interpreted as ways of decreasing the landlord's monitoring cost. For example, if a landlord is generous and takes care of the tenant's children, the tenant is more likely to feel a pressure to work hard for the landlord. Through the patron-client relationship the worker internalizes a strong obligation to work hard for the landlord and thus reduces the cost of monitoring.

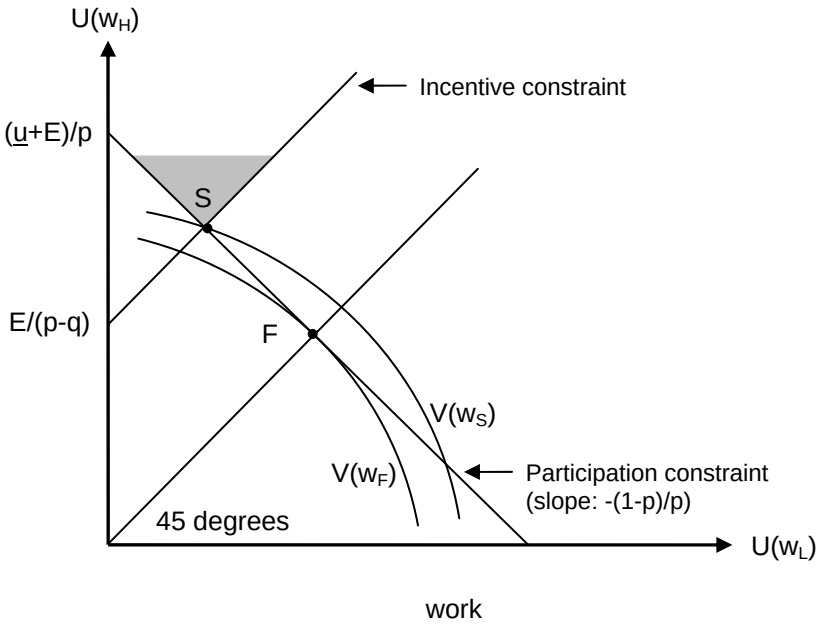

Figure 2.1 Optimal contracts in principal-agent theory. Source: Ray (1998:471)

Fig. 2.1 illustrates the optimal contracts between the principal and the agent. The horizontal axis depicts the utility of the wage received by the tenant in the state where output is low and

the vertical axis when output is high. The curves show the utility of the landlord. His profit increases as the curves move closer to origo. Point F in the diagram is the first best solution where the landlord's utility curve intersects with the tenant's participation constraint. This contract is on the 45 degree line, which implies that the tenant receives the same wage in both states of nature. If the reservation utility of the tenant increases, it implies that the participation constraint shifts to the right. As a consequence, the optimal contract will imply a lower utility to the landlord.

In sum, the first best contract is beneficial for the landlord since the wage given to the tenant is low. The contract is also pareto optimal. However, the assumptions on which this contract is based are not very realistic. Moral hazard is likely to occur and monitoring of the worker involves costs to the landlord. To reduce the problem of moral hazard and reduce monitoring costs, the landlord may choose another contract, which we will look at in the next section.

Second Best Contracts (Effort is not Contractable, Scope for Moral Hazard)

Under the assumption that the tenant's provision of unobserved effort cannot be monitored without cost, we need to provide the tenant with incentives for contributing unobserved effort so as to avoid moral hazard. A contract then has to meet the incentive constraint, which in essence implies that the tenant voluntarily contributes unobserved effort because he is rewarded for this. Ray (1998:469) shows how this means that the landlord is no longer able to provide full income insurance to the tenant. The tenant's wage must be higher in the good state than in the bad. The incentive constraint implies that the tenant must bear some risk. The optimal second best contract is shown in point S in Fig. 2.1. The contract has to fulfil both the participation constraint and the incentive constraint. The shaded area shows all the possible contracts the landlord may offer the tenant where both the participation and the incentive constraints are met. The landlord chooses point S as this contract maximizes his utility. The landlord's utility curve is on a lower level at point S than under the first best contract (F). Therefore, the utility of the landlord is reduced when the first best contract can no longer be achieved. However, under this new contract the cost of monitoring the laborer is likely to be less since the tenant has an incentive to contribute the unobserved effort voluntarily. Thus, there are two opposing effects here. One the one hand, the change from the first best contract to the second best implies that the landlord's profit is decreased. On the other hand, the cost of monitoring is likely to decrease. This suggests a trade-off for the landlord between concerns

about profit and costs of monitoring. From the tenant's perspective, the trade-off is between full insurance and incentives for effort.

The welfare for the tenant should not be affected when the contract is changed from a fixed wage contract to a second best contract. The profit-maximizing landlord will set the wage exactly equal to the tenant's reservation utility, which is a function of his outside option. Unless the outside options increase in utility, the tenant will not receive a higher wage. Therefore, the tenant's utility should be the same when a fixed wage contract is replaced by the second best contract.

Stiglitz (1974) develops a model that sheds light on how the contract terms depend on the tenant's risk preferences and the variance of the crop.[9] The output q is a function of effort e and a random shock ε with zero mean and variance σ^2.

$$q = e + \varepsilon$$

The landlord is assumed to be risk neutral and the tenant risk averse with the following utility function, where y is his income and r_T a measure of the tenant's risk aversion.

$$\mathrm{U}(y) = \mathrm{E}(y) - \frac{1}{2} r_T \, \mathrm{Var}(y)$$

The disutility for the tenant's effort is $1/2ce^2$. The tenant either gets paid through a share (s) of output or pays a fixed rent (R) to the landlord and gets the rest himself; $y = sq - R$. The tenant's incentive constraint has to be met. If he is to put in effort he has to be rewarded accordingly.

$$e = \mathrm{argmax}\left(\mathrm{U}(y) - \frac{1}{2} ce^2 \right)$$

The solution to this[10] is

$$e = \frac{s}{c}$$

[9] This presentation of Stiglitz's model is based on a simplification made by Ghatak (2006).
[10] See Appendix to chapter 2 for more calculation.

The landlord maximizes his income subject to the incentive constraint

$$\mathrm{E}((1-s)\,q+R)=\frac{s(1-s)}{c}+R$$

and subject to the participation constraint that ensures that the tenant receives at least his reservation utility *u*:

$$u \leq se - R - \frac{1}{2} r_T s^2 \sigma^2 - \frac{1}{2} ce^2$$

The solution to this problem[11] is

$$s = \frac{1}{1 + r_T \sigma^2 c}$$

The solution has an interesting interpretation. The share (s) received by the tenant decreases if the tenant is more risk averse and if the crop is more risky (increased variance). This is similar to the results given in the previous section, but the difference is that the payment to the tenant is given as a share of output in contrast to a fixed wage. If the tenant is risk neutral, the optimal contract is a fixed rent contract. This is also the most efficient according to the Marshallian argument (Ray 1998: 425-427). This type of contract gives the tenant strong incentives for effort.

Summary

The principal-agent analysis shows that the first best solution is pareto optimal and optimizes social surplus. However, this solution is based on unrealistic assumptions of an absence of moral hazard and that perfect monitoring is not costly. I have argued that these assumptions are more likely to be met through some of the mechanisms that take place in patron-client relationships, but it is very unlikely that moral hazard can be eliminated completely. Thus, the landlord faces a trade-off. He may offer a fixed and low wage, but unfortunately with high probability of low effort from the tenant. A second alternative for the landlord is to offer a contract where the tenant receives a share of production, which implies that the tenant receives a higher wage in the good state. The first alternative is most profitable for the landlord, but the model does not take into account the cost of monitoring. If the cost of

monitoring is high, the landlord might be better off offering a share contract. The third alternative for the landlord is to offer a rent contract where the tenant pays a fixed sum to the landlord. This contract is considered the most efficient because the tenant has maximum incentives for effort.

2.3.3 Consumption smoothing through labor tying

Tenants not only face risk in terms of stochastic agricultural output. Tenants who try to find work at the spot market also face the risk of unemployment due to different levels of demand for labor in the slack and peak seasons or to a scarcity of casual work in general. Bardhan (1983:503-6) develops a model in which a risk averse laborer and a risk neutral landlord agree to enter a long-term labor contract. The laborer receives a fixed wage conditioned on tying his labor supply to the landlord. The wage the permanent worker receives is the annual expected wage on the spot market minus an insurance premium. This arrangement is not only beneficial for the tenant, who obtains consumption smoothing throughout the year. The landlord gains too because he avoids the risk of not getting enough workers in the peak season. In addition, the landlord can save recruitment costs by hiring labor on a long-term basis (Bardhan 1979).[12]

In this model, mean output is x. The random aspect of output is captured in A. To cultivate the land, a fixed amount of labor (β) is required per unit output. The employer's profit is given by equation (1) when the labor requirement is less than the amount of tied labor (L_t). The landlord's profit is the revenues from production less the cost of two periods of minimum consumption (c) to the tied laborers. Bardhan assumes that both parties have equal discount rates (ρ). If the output requires more labor than the landlord has tied to himself, he must find extra labor ($\beta Ax - L_t$) on the spot market which can be hired at wage W. In this case the landlord obtains the profit given in equation (2).

$$(1) \qquad \pi = \pi_1 = Ax - (2 + \rho)cL_t \quad if\ \beta Ax_1 \leq L_t$$

$$(2) \qquad \pi = \pi_2 = Ax - (2 + \rho)cL_t - (\beta Ax - L_t)W \quad if\ \beta Ax_1 > L_t,$$

[11] See Appendix to chapter 2 for more calculations.

[12] According to efficiency wage theories the employer offers the worker a wage that is just above the market clearing wage level. This wage gap gives the employed worker an incentive for effort since if his performance is unsatisfactory he will end up in the pool of casual laborers. A tied labor contract implies that the tied laborer receives better conditions than casual workers. The laborer's productivity might also increase due to better nutrition as a consequence of the regular meals he receives under a long-term labor contract.

If we now assume that the landlord is risk neutral and workers are risk averse, the optimal arrangement between them is, according to this model, a tied labor contract where the laborer is secured by a fixed income equal in both periods and near or at the laborer's minimum consumption. He thus obtains consumption smoothing over time (Bardhan 1983:503). Theoretically, tied labor arrangements will only exist if both the worker and landlord differ in their risk preferences and if there is sufficient variation in demand for labor in the two seasons (Mukherjee & Ray 1995: 209-10).

Bardhan also makes a prediction of who will be tied laborers. A worker who is not tied to the landlord obtains an income y_0 in the lean period and $y > y_0$ in the peak period. We assume that y_0 is identical for all such workers, but in the lean season the laborers have a different alternative income source, that is, *y* has a cumulative distribution G(y). W is the wage in the spot market and the worker will enter the spot market if $W > y$. Now, there will be a critical value of y that separates those who are better off accepting a tied labor contract and those who join the pool of casual laborers. Those who are more likely to find well-paid casual work or non-labor income (higher y) are less likely to accept a tied labor contract. The need for the insurance or consumption smoothing provided by the tied labor arrangement is not necessary as the laborer is better off being a part of the pool of casual workers. The worker will choose the labor tying arrangement if the following inequality holds:

$$EU(\max(y, W)) < (2 + \rho)\, U(c)$$

A worker who chooses the tied labor contract receives more utility from two periods of minimum consumption (right hand side of inequality) compared to the expected utility the worker receives from either casual labor (W) or other income generating activities (y).

Many predictions can be derived from this model. First, tied labor contracts will only exist if there is a difference in risk preferences between the workers and the employers. Also, the most risk averse workers are most likely to enter labor tying arrangements. Second, reduced seasonal variation in the demand for labor implies less demand for tied labor contracts. Third, if the wages in the market for casual workers goes up or workers get access to better income opportunities (for example, their own land), the number of tied labor contracts should decrease.

2.3.4 Interlinkage with Credit

It is common to observe in the agricultural sector in developing countries so-called interlinkage, which implies that a labor contract includes dealings in several markets simultaneously. A common example is the landlord's provision of consumption credit to the laborer. This used to be viewed as a form of exploitation, as discussed in 2.2. Braverman & Stiglitz (1982) show, however, that interlinkage increases the expected utility for both parties. The mutually beneficial arrangement can be explained by the fact that the landlord usually has better access to credit than a landless peasant, who may be excluded from the formal credit market. It has also been argued that the landlord has an incentive to charge lower interest than the alternative credit source for the tenant, usually the moneylender, because this increases his control over the tenant's behavior (Dasgupta, Knight & Love 1999:164).

2.3.5 Screening Models – Self-selection by Contractual Choice

So far, we have assumed that laborers are homogeneous and do not differ in their ability to work. An employer who hires laborers will obviously choose the best qualified laborer. However, the laborer's true ability to perform a specific task is hidden information to the employer and can only be revealed after the job has been completed. The worker himself is aware of his ability. This demonstrates clearly the problem of asymmetric distributed information: a laborer knows his ability, but the employer does not. A way for the employer to overcome this problem is to offer different types of contract that reward the worker according to his ability. The true ability of the worker will thus become apparent as he chooses the optimal contract according to his ability.

It has been suggested that as agricultural laborers accumulate human and physical capital, they progress from wage labor to sharecropping, to renting and finally owner cultivation. This is known as the agricultural ladder hypothesis based on the study of farmers in the American South (Spillmann 1919). It is disputed whether workers in fact climb this ladder, but there are several types of evidence that support the idea that as workers climb the ladder they contribute more human and physical capital and the landowner provides less (Cox 1944). Spillman's research suggests that workers receive higher remuneration at higher rungs of the ladder (Spillmann 1919:70). He also suggests that a larger share of the profit of the land is given to workers at higher rungs of the ladder. These differences in income between the three contracts might reflect the risk for the worker under the three contracts.

The agricultural ladder may be seen as a way to describe the worker's provision of entrepreneurial inputs (Hallagan 1978:345-6). Income may be seen as consisting of two components, rent and profit (Knight 1957:ch. 9). According to Knight, profit is the difference between total revenue and total rent and is closely linked to entrepreneurial input. A tenant under a fixed wage contract will receive a wage for the value of his time. The landowner provides all the entrepreneurial input and thus all the profit. Under sharecropping, both parties contribute entrepreneurial input and the profit is shared likewise. Under a fixed rent contract, the tenant provides all the entrepreneurial input and hence takes all the profit.

Hallagan (1978:349-53) develops a model where a landowner chooses laborers that differ when it comes to their entrepreneurial ability. The amount of entrepreneurial input the worker may potentially contribute is unobserved to the landowner and it is assumed that it is more or less impossible or very costly to monitor the provision of entrepreneurial input. Offering the laborers a menu of contracts may be a screening device to separate workers with high and low entrepreneurial abilities. The entrepreneurial input might reflect the worker's skills concerning planting, irrigation, cultivating and harvesting, all factors that affect the total agricultural output positively. Agricultural output is hence considered to be an increasing function of the worker's entrepreneurial input.

Hallagan argues that if the worker is offered a fixed wage contract he has no incentive to supply any entrepreneurial input. He receives the same wage anyway. Now suppose the worker is offered two types of contract, a fixed wage contract and a rent contract that involves a fixed amount paid to the landowner, regardless of total output. In the latter contract the tenant keeps the entire surplus that exceeds the rent given to the landlord. Workers with high endowments of entrepreneurial input (E) have thus clearly an incentive to choose rent contracts as their total revenue will exceed their income under a wage contract. Workers with low levels of E will benefit most from a wage contract.

These ideas can be illustrated in a diagram where workers' income is displayed on the vertical axis and the entrepreneurial input on the horizontal axis (see Figure 2.2). WW represents the fixed wage contract. RR shows the worker's income under a fixed rent contract, the income increases due to larger entrepreneurial input. The worker's income under a sharecropping contract is shown as SS. In this case, both the landowner and the tenant provide E and the curve will be in between RR and WW.

Hallagan's models suggest that workers with E ranging from 0 to E_1 will be better off choosing a wage contract. A wage contract will give such a worker higher income than both a sharecropping and a rental contract. A worker with E ranging from E_1 to E_2 will profit most from a sharecropping contract. The top end of workers when it comes to entrepreneurial ability, with higher E than E_2, will opt for rental contracts. A worker with 0.5 units of E will receive Y_2 under a sharecropping contract, compared to Y_1 and W under a rental contract and a wage contract respectively.

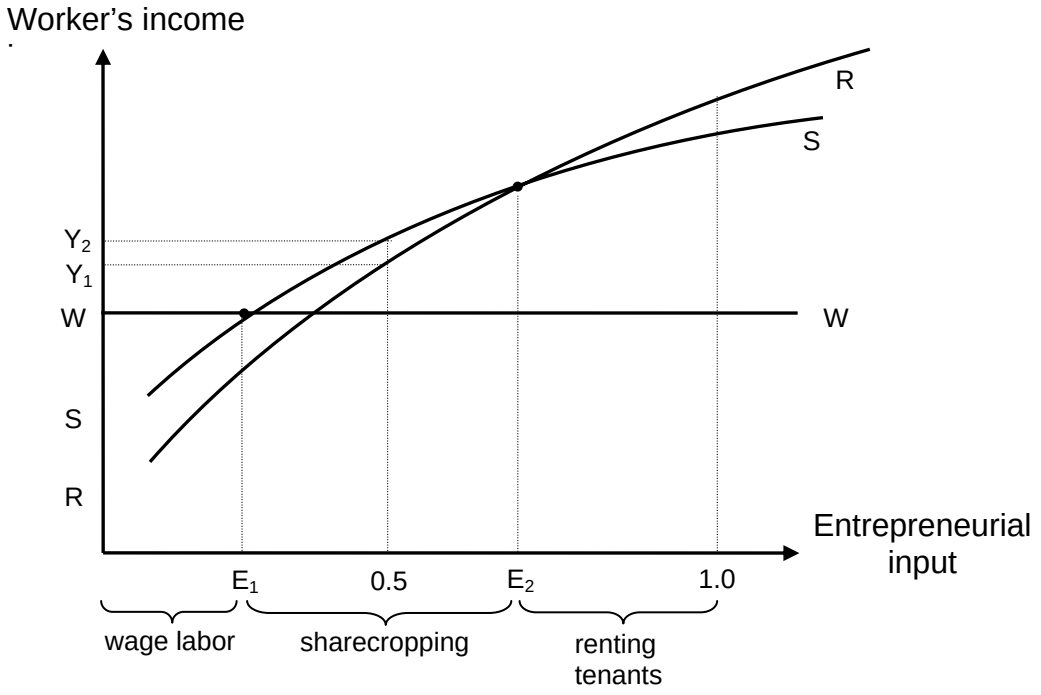

Figure 2.2. Selection of labor contract based entrepreneurial input. Source: Hallagan 1978

Hallagan's model provides an explanation why we may observe several types of contract existing simultaneously in the same area. Workers with low levels of entrepreneurial input will automatically choose the fixed wage, whereas more skilled laborers choose labor contracts where they can contribute more entrepreneurial input.

2.3.6 A Landlord Behaving as a Monopsonist

In all our discussions above we have assumed that the tenant reservation utility is exogenously given. This section examines the possibility that landlords may influence this

reservation utility if they have market power. In a conventional analysis of the labor market, we assume many suppliers and buyers, thus generating a competitive equilibrium wage. The landlord will then hire labor until the marginal product of the laborer equals the wage. Departure from this efficient solution may arise when distribution of land is highly unequal. For example, if one or a few landlords own all land in an area and laborers are landless, the landlords do not any longer have to take the wage as given, but may have power to determine the wage. The unequal landholding favors the employer's ability to exercise market power when it comes to wage determination, given that the laborers are not organized in labor unions.

In the pure monopsony model there is one single buyer of labor and many workers offering their labor (Varian 1993:438-440). We assume that the wage is an increasing function of how much labor the employer hires, $w'(L) > 0$, and that the firm's product is to be sold in a competitive market. The profit maximization problem facing the monopsonist is:

$$(1) \qquad Max_L \; pf(L) - w(L)L$$

$$(2) \qquad pf'(L) = w + w'(L)L$$

The solution (2) states that the marginal revenue of labor should be equal to its marginal cost of labor. Note that the right hand side of the equation shows how the cost of labor, that is, the wage, increases as the employer hires more workers. The solution to equation 2 is satisfied at point A in Figure 2.3. The monopsonist pays wage W_M and hires L_M units of labor. The free market solution is where the supply curve crosses the demand curve at point B. The free market solution generates both a higher wage and employment, W_E and L_E, respectively. The free market solution also implies a higher output and is the pareto optimal solution. However, the employer's profit is largest when he behaves as a monopsonist and where the wage is under the competitive level (C).

If the laborers are unionized, the wage will be somewhere between W_M and W_A, depending on the bargaining power and preferences of the labor union. If the number of landlords increases, the market wage will gradually approach the competitive solution (W_E). Co-operation among the landlords is increasingly difficult to achieve when landowners (the buyers of labor) increase in number, due to the higher cost of collective action. One single landlord will always have an incentive to hire an extra laborer at a higher wage. He then

increases his production and his profit. When the other landlords observe this, the cartel will gradually dissolve and the wage level will converge to the competitive level. Monopsony is thus fragile and is easily undermined by competition.

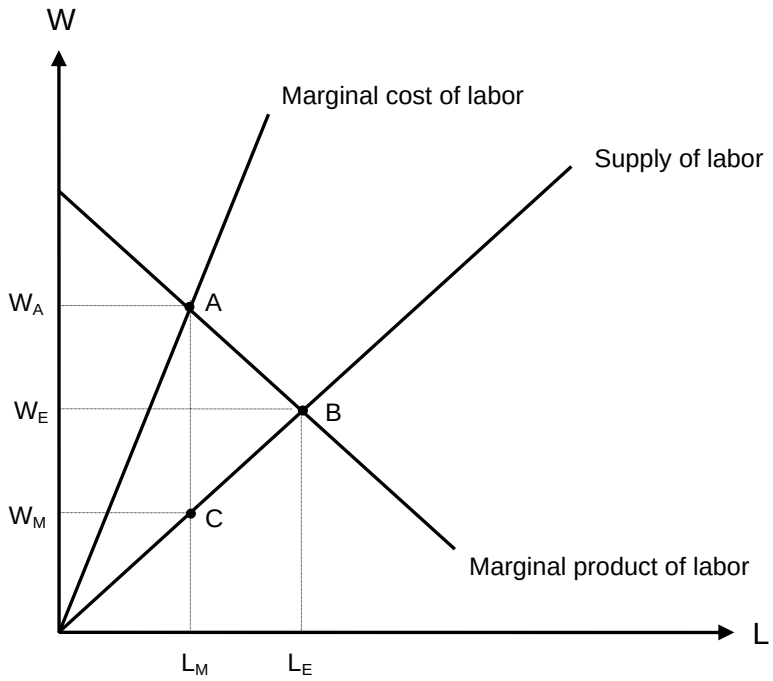

Figure 2.3. Equilibrium wage and labor demand when a landlord behaves as a monopsonist.

The question is how the employers are going to maintain this cartel that enables rent extraction from the workers. In agricultural areas where the population size is low, peasants may easily move to other places and establish their own farms and avoid the surplus extracting policies. One possibility is coercive policies initiated by the landowning elites to force workers to offer their labor cheaply (Behrmann & Srinivasan 1995:2670). If coercion is not possible, an alternative solution is to reduce the reservation utility for workers' outside options sufficiently so that they will offer their labor voluntarily to the landlords. Behrmann & Srinivasan (1995:2673-7) suggest four policies that have been used historically by landowning elites to make workers offer their labor input voluntarily. First, the ruling class may restrict the farmers' right to capture unoccupied land and not let the farmers formalize their property claims. Second, it may be in their power to impose taxes that discriminate against small free peasants. Third, the ruling class may set up a market mechanism that refuses to buy from free peasants. Fourth, provision of public goods such as credit and roads may strongly favor the ruling class and thus reduce the profitability of the small-scale free

peasant. The result of these distortions is higher rent for the landowners but efficiency loss for the economy as a whole.

Conning (2005:14-5) also suggests that landlords may use several mechanisms to sustain their cartel by limiting or restricting the laborer's outside options. For example, tied labor arrangements can be such a device. Other examples are the restriction of laborers' physical mobility, restriction on access to credit and limitations on the right to own land. Following the abolition of slavery or serfdom, it has been common to observe elites advocating for laws that obtain the goals mentioned above (Ransom & Sutch 1977:198).

A ban on serfdom or bonded labor arrangements can result in a transition to an efficient solution followed by a higher wage, but the landowning elite is likely to react by imposing other market distortions to extract surplus, which is likely to harm the freed laborers. In Conning's model, total output for the society is largest under the competitive solution, but the profit for the landowners is much higher under the tied labor regime, and thus pareto-inferior. A transition to the competitive regime reduces the landlords' profit and they have no incentive to encourage this transition.

A way to make the collusive equilibrium even more stable is to establish a stratified system in the society. A more servile labor force may be obtained by linking certain tasks, such as agricultural labor under tied labor contracts, to a certain class with a specific distinction such as race, caste, nationality, ethnicity or gender (Conning 2005:18). Akerlof (1976) develops a model that demonstrates how a stratified society, like those under caste systems, can remain in equilibrium binding each individual to a fixed position in the social hierarchy. If one person deviates from the rules in this system he will be punished by all the others. Thus, the system remains in equilibrium.

Schaffner (1995:243) suggests that the landlord deliberately tries to limit the horizon of the workers in order to pressure them to offer their cheap labor voluntarily. The concept of "limited horizon" implies here that there exist better employment opportunities for the bonded laborer but the workers are not conscious of these options due to their limited horizon. Even if the servile bonded laborers are aware of better employment opportunities elsewhere, the laborer refuse to exploit these opportunities due to what Schaffner describes as a group reference effect. A servile worker will behave similarly to other workers whom they interact

with on a daily basis. If they interact only with other bonded laborers, they will ignore better income opportunities that might exist elsewhere.

2.4 Conclusions and Theoretical Implications

This chapter has given two broad perspectives to explain the existence of bonded labor. The first perspective describes how workers are kept as bonded laborers against their will. The employers may, for example, use debt traps (Bhaduri, section 2.2.1) or more subtle mechanisms in patron-client relations (Bourdieu, section 2.2.2) to force the laborer to choose bonded labor contracts, or, the bonded laborer may develop an identity as a bonded laborer that makes him believe that being a bonded laborer is the appropriate option for him (March, section 2.2.3).

The other perspective on bonded labor is that this is a voluntary agreement between the employer and the worker where both parties gain. Bonded labor or tied labor may exist for many reasons according to this perspective. First, differences in risk preferences between the employer and the worker (Ray, section 2.3.2) may explain why the worker and the employer enter the agreement. Second, variations among workers in their access to alternative employment opportunities and a risky market for casual labor may also explain the magnitude of tied labor contracts (Bardhan, section 2.3.3). Third, the landlord screens the workers by offering them a menu of contracts (Hallagan, section 2.3.5). Those with the lowest entrepreneurial abilities will opt for tied labor contracts. Fourth, unequal distribution of land enables the employer to behave as a monopsonist and extract surplus from the laborer and reduce the social surplus (Varian, see section 2.3.6).

Question 1: What may explain the existence of kamaiya contracts?

According to the *unfree perspective*, the *kamaiyas* have ended up in this kind of contract through, for example, debt traps designed by the employer. Another possibility is that the *kamaiyas* have developed identities through which they perceive being *kamaiyas* as the appropriate labor contract for them. If these perspectives are an accurate explanation for the existence of *kamaiya* contracts, we should expect that *kamaiyas* rarely change to other kinds of labor contract. Once a *kamaiya*, he stays a *kamaiya* for a long time or his whole life. Also, we should expect that *kamaiyas* do not consider other alternatives to being *kamaiyas*, either

because repaying their debt is impossible or because they are simply not aware of other employment opportunities.

Under the assumption that *kamaiyas* make decisions in the classical rational economic way, *kamaiya* contracts exist because both parties gain from the agreement. An employer is usually assumed to be risk neutral and a poor worker risk averse. Thus, there is a potential for trading in risk. For example, principal-agent theory suggests that the optimal contract between a risk neutral employer and a risk averse tenant is a fixed wage contract where the tenant implicitly buys insurance from the employer. Similarly, Bardhan's model of labor tying predicts that risk averse workers with limited access to alternative employment opportunities will have an incentive to enter into a tied labor arrangement with a risk neutral landlord if there is sufficient seasonal variation in the demand for labor. Some predictions can be made from these two models. First, the most risk averse persons are more likely to enter *kamaiya* contracts. Data on risk aversion is not available. However, since land is an important indicator of wealth, landholding may serve as a proxy for the risk-bearing capacity of the household. Thus, if risk aversion decreases with wealth, households with no or little land will be more likely to enter *kamaiya* contracts. Second, remote areas where households have less access to alternative employment opportunities will have more *kamaiya* contracts than areas with better access to alternative employment opportunities. Distance to cities or other markets should be positively correlated with the proportion of *kamaiya* contracts. Since there is more casual work available in cities, the demand for tied labor contracts will be less in areas close to markets or cities. Third, according to principal-agent theory the fixed wage contract does not give an incentive for the tenant to provide effort. It is likely that tenants under fixed wage contract – here, the *kamaiya* – will be considered to be lazy.

According Hallagan's screening theory, workers who enter tied labor arrangements should be those with the lowest entrepreneurial skills. This cannot really be tested, since information on entrepreneurial skills is not available from the data we gathered.

The last theoretical perspective suggests that the landlord behaves as a monopsonist due to his large landholding. According to this perspective we should expect that areas where inequalities in landholdings are large should have a higher number of *kamaiya* contracts.

Question 2: What factors may change the number of kamaiya contracts?

According to the unfree perspective, the number of *kamaiya* contracts may be reduced if the *kamaiyas* start to question whether being a *kamaiya* is an appropriate labor contract for them. According to the rule following concepts of March, the *kamaiya* may develop a new identity which causes him to choose a different option as appropriate according to the situation he faces. We should expect to observe that *kamaiyas* increasingly question whether they are getting a fair wage compared to how much work they put in. Also, we should expect that *kamaiyas* are increasingly made aware that they can choose other contracts than the *kamaiya* contract.

According to principal-agent theory and Bardhan's model for tied labor, the underlying predictors of *kamaiya* contracts are differences in risk preferences among the employers and workers and to what extent the workers improve their access to alternative income opportunities. If these factors change, we should expect a change in the amount of *kamaiya* contracts. For example, if alternative income opportunities for laborers increase or if laborers become less risk averse, we would expect a decrease in the number of *kamaiya* contracts.

However, the number of *kamaiya* contracts may be reduced more suddenly if a third party regulates the economic interactions between the employer and the laborer. In Nepal, *kamaiya* contracts were forbidden in 2000. This should reduce the number of *kamaiya* contracts if the ban is perceived as a credible threat to the landlords and workers. Rational economic actors will only accept a ban if they perceive that the cost of not accepting the ban is greater than complying with it. This all boils down to whether the third party, here the state, manages to introduce a credible ban and cause the landlords to change behavior.

Question 3: Will a ban on kamaiya contracts make the kamaiyas better off?

According to the unfree perspective, the *kamaiya* is held in bondage against his will through, for example, debt traps, as suggested by Badhuri, or the *kamaiyas* have developed an identity as a bonded laborer and remain *kamaiyas* for that reason. One element of the ban on the *kamaiya* contract was that the *kamaiyas'* debts were cancelled. If debt was the reason that kept the *kamaiyas* bonded, the cancellation of debt should have enabled them to choose better and more profitable employment opportunities and made them better off. A ban can help the *kamaiyas* escape the more mental aspect of this pattern of exploitation (the patron-client

relationship) and apply more rational economic reasoning in the search for employment alternatives and not be tied by culture and tradition.

If we assume that the *kamaiya* contract in fact was a rational efficient institution (according to principal-agent theory and Bardhan's model for labor tying) where both parties gained, banning the labor contract will make both parties worse off since they are no longer able to choose their best option. For instance, the laborer would not any longer be able to smooth his consumption through the labor contract. They had chosen to enter a *kamaiya* labor contract in the first place (revealed preferences). If they do not have this best option any longer, their utility will decrease. This implication of reduced welfare may be challenged if the ban causes other effects in the economy that increases the utility of the former *kamaiyas*. For example, the ban may lead to a rise in the wage level for casual labor. This possibility will be discussed more thoroughly in chapter 5.

Appendix to Chapter 2

A.2.1. Simulation of Insurance Premium

This simulation shows how the landlord can extract different levels of insurance premium for different levels of the tenant's risk aversion and different variance of his income (x). In the example the tenant can choose between a fixed income or to engage in a lottery with two states, one good and bad. The tenant has the following exponential concave utility function:

$$U(x) = 1 - \mathbf{e}^{\left(-\frac{x}{R}\right)}$$

R is the tenant's risk tolerance. R can be found be asking the tenant what is the largest Y he would be willing to win with a probability of 0.5 when there is the same probability that he will lose Y/2. The answer to this question is the risk tolerance (Clemen and Reilly 2001:543-4). The more risk averse, the lower the value of R. In the table, I have calculated how much the landlord can extract in insurance premium to make the tenant indifferent between taking part in the lottery with the two different states or receiving a fixed wage. The expected wage is 50. (100/0) means that the tenant receives 100 in the good state and 0 in the bad state. The conclusion from the simulation is that the landlord can extract a higher insurance premium when the tenant's risk aversion increases and the variance of income increases.

	100/0	90/10	80/20	70/30	60/40
R=800	1.6	1.0	0.6	0.2	0.1
R=400	3.1	2.0	1.1	0.5	0.1
R=200	6.2	4.0	2.2	1.0	0.2
R=100	12.0	7.8	4.4	2.0	0.5
R=50	21.7	14.5	8.5	3.9	1.0
R=25	33.1	23.7	14.8	7.3	1.9

A.2.2 Calculation of Stiglitz's Model (1974)

Stiglitz's (1974) model shows how contract terms depend on the tenant's risk preferences and the variance of the crop. The output q is a function of effort e and a random shock ε with zero mean and variance σ^2.

$$q = e + \varepsilon$$

The landlord is assumed to be risk neutral and the tenant risk averse with the following utility function, where y is his income and r_T a measure of his risk aversion.

$$\mathrm{U}(y) = \mathrm{E}(y) - \frac{1}{2} r_T \, \mathrm{Var}(y)$$

The disutility for the tenant's effort is $1/2ce.^2$ The tenant either gets paid through a share (s) of the output or he pays a fixed rent (R) to the landlord and gets the rest himself; $y = sq - R$. The tenant's incentive constraint has to be met. If he is to put in effort he has to be rewarded accordingly.

$$e = \mathrm{argmax}\left(\mathrm{U}(y) - \frac{1}{2} ce^2 \right)$$

$$\mathrm{E}(y) = \mathrm{E}(sq - R)$$

$$\mathrm{E}(sq - R) = se - R$$

$$\mathrm{Var}(sq - R) = s^2 \, \mathrm{Var}(q)$$

$$s^2 \, \mathrm{Var}(q) = s^2 \, \sigma^2$$

$$e = \mathrm{argmax}\left(se - R - \frac{1}{2} r_T \, s^2 \, \sigma^2 - \frac{1}{2} ce^2 \right)$$

$$s - ce = 0$$

$$e = \frac{s}{c}$$

The landlord maximizes his income subject to the incentive constraint

$$\mathrm{E}((1 - s) \, q + R) = \frac{\mathrm{s}(1 - s)}{c} + R$$

and subject to the participation constraint that ensures that the tenant receives at least his reservation utility u:

$$u \le se - R - \frac{1}{2} r_T \, s^2 \, \sigma^2 - \frac{1}{2} ce^2$$

By using the incentive constraint we can simplify to

$$u \le \frac{1}{2} \frac{s^2}{c} - R - \frac{1}{2} r_T \, s^2 \, \sigma^2$$

Solving for R:

$$R = \frac{1}{2}\frac{s^2}{c} - \frac{1}{2} r_T s^2 \sigma^2 - u$$

This can be substituted into the landlord object function which is maximized with respect to s:

$$argmax_s \left(\frac{s(1-s)}{c} + \frac{\frac{1}{2}s^2}{c} - \frac{1}{2} r_T s^2 \sigma^2 - u \right)$$

The first order condition is

$$\frac{1-2s}{c} + \frac{s}{c} - r_T s \sigma^2 = 0$$

Solving for s

$$s = \frac{1}{1 + r_T \sigma^2 c}$$

3. Study Design and Methods

3.1 Introduction

The fieldwork for this thesis was carried out in Nepal during the months of February and March of 2005. The fieldwork was a part of a larger research project led by Magnus Hatlebakk at Chr. Michelsen Institute, Norway, in collaboration with colleagues from the Centre for Economic Development and Administration, an applied research institute at the Tribhuvan University in Kathmandu, Nepal. The aim of this project was to map and evaluate interventions into bonded labor (*kamaiya*) in Nepal, including the emancipation in 2000. The project started in the autumn of 2004 and ended in 2006. The Norwegian Research Council sponsored the project. This chapter explains the choice of research methodology and how the field study was carried out. In the latter part of this chapter I discuss possible weaknesses of the methodology.

3.2 Choice of Research Design

The goal of the field study was to examine the effects on the agricultural economy after a ban on the *kamaiya* labor institution was introduced in 2000 and to find out whether the living conditions of former *kamaiya* laborers in Western Terai had improved. An ideal methodological approach to this problem would be to interview a sample of *kamaiyas* before and after *kamaiya* contracts were forbidden. This "*treatment*" group should be compared with an identical *control* group of *kamaiyas* who were not exposed to the reform. A control group is necessary because the living conditions for *kamaiyas* might be influenced by many factors. Here, however, the point is to isolate the effect of the ban on the living conditions for *kamaiyas*, holding other factors that might affect those living conditions fixed. A control group would enable us to do so and provide a so-called counterfactual hypothesis, which means that this group would tell us what would have been the situation for the *kamaiyas* had the intervention not taken place. This methodology would, in principle, be able to identify the effect of the ban on the *kamaiyas*' living conditions and control for other observable factors that affect the *kamaiyas*' living conditions. However, we were not able to use this approach since we could not perform interviews with *kamaiyas before* the intervention, and we had no control group that was not affected by the intervention.

An alternative strategy was to perform a cross-sectional survey. This method gives data that can tell us how relatively well off former or present *kamaiyas* are compared to other groups in society at the time the survey was undertaken. To find out whether or not the *kamaiyas*' living conditions have improved, we have to rely on their subjective evaluations. This type of survey cannot tell for sure whether the living conditions for *kamaiyas* have improved due to the ban or due to other factors. Nevertheless, based on the data gathered we may investigate whether it is likely that the living conditions for *kamaiyas* have improved.

Hatlebakk (2006) compares the casual wage level in villages dominated by *kamaiyas* with casual wage levels in villages not dominated by *kamaiyas* before and after the *kamaiya* reform. Section 5.4.3 describes how this methodology gives support to the conclusion that the reform had a positive effect of the welfare of the *kamaiyas*. Inspired by this methodology, I compare the payment the *kamaiyas* received prior to and after the reform.

A survey may be either intensive or extensive. An intensive approach, where few individuals are asked to give information about many variables, furnishes in-depth knowledge of how the respondents perceive the world (Ringdal 2000:108). This approach is preferred when little knowledge is available about a social phenomenon (Ringdal 2000:103). One weakness of this approach is that the findings may not be generalizable to the wider population. Generalization was of great concern in this project. We therefore chose an extensive approach, covering many respondents and using random sampling of households to enable inferences to be drawn about a larger population (Bulmer & Warwick 1983:9). Previous studies in Nepal had gathered substantial qualitative knowledge about the *kamaiyas* and their living conditions. This study was able to build on this body of literature to design questionnaires covering relevant aspects of the group's living conditions.

Before the fieldwork started, several key informants among NGOs in Kathmandu who had been working on the *kamaiya* issue were contacted. They provided a useful introduction to the topic and explained the present status of the ex-*kamaiyas* in Nepal. Some NGOs and research institutes have published a number of reports about the *kamaiyas* (see, for example, Gautam (2001), Abullaish (2004), Sharma (1998, 2001, 2003) and Gurung (2004). ILO and INSEC turned out to be very helpful key informants.

3.3 Sampling of Households

The sampling of respondents was done before entering the field. Following the emancipation in 2000, the Nepalese authorities identified 18,291 *kamaiya* households in the districts of Dang, Banke, Bardiya, Kailali and Kanchanpur, all in western Nepal (Sharma 2003:1). Based on these figures, we selected 20 Village District Committees (VDC)[13] with a high proportion of *kamaiyas*. A VDC consists of 9 wards. We decided to visit 2 wards within each VDC so as to be able to compare findings within one VDC. To obtain a random sample, we chose households randomly from official voter lists. Each ward-level sample consisted of 20–28 households. Since *kamaiyas* come mainly from the Tharu indigenous group, we selected wards within VDCs with a high density of Tharu names,[14] as we reckoned this would be a good indicator of the presence of *kamaiyas* or ex-*kamaiyas*. Nearly all *kamaiyas* are Tharus (see section 4.3).

Our fieldwork became more complicated due to general strikes imposed by the Maoist guerrillas. The strikes reduced the number of VDCs we were able to visit. Also, in some areas we were refused access to the villages by the Maoist guerrillas. We had to relax the selection criteria of VDCs based on a high presence of *kamaiyas*. We ended up choosing VDCs that were less affected by the Maoist conflict. Altogether, 8 VDCs in 4 districts were covered.

One of the problems we encountered was that we found very few former and present *kamaiyas* in our samples (see section 4.2). Thus, to obtain more data about the *kamaiyas*, we complemented our samples by interviewing present and former *kamaiyas* we came across in the villages, in addition to a sample of *kamaiyas* from the new *kamaiya* settlements. These extra interviews were always performed after completing the interviews with the people in our samples. The reason for this was that we did not want to reveal to the villagers that we were primarily interested in *kamaiyas*. The aforementioned additional interviews were not chosen by a random sample procedure. In other words, the information we obtained about *kamaiyas* came from two groups of respondents: *kamaiyas* and former *kamaiyas* in the random samples, and *kamaiyas* and former *kamaiyas* from the non-random samples of extra interviews.

[13] Each district consists of many Village Districts Committees (VDC).
[14] Our local guide was able to identify Tharu names from the voter lists.

3.4 Interviews as a Source of Information

According to the positivistic perspective on interviews, those being interviewed are perfectly capable of giving true and accurate information about their lives. Their answers are not affected by the context of the interview and they are neutral reporters of their lives (Thagaard 1998:79). The opposite view, the constructivist position, regards the respondent's description of his life as invented during the interview. Here, the information gathered is, to a large extent, biased by the relationship between the respondent and the interviewer (Thagaard 1998:79). Our methodological position represents an intermediate one between these two. We believe the respondent is able to give reliable information regarding the household. However, it is important to consider how we, as interviewers, may influence the respondent's answer. One aspect we were concerned about was strategic self-representation among the respondents. For example, if the respondents believed we were from an NGO looking for target groups for a distribution of benefits, they could potentially give a distorted picture of their living conditions hoping that this would make them more likely to be chosen as beneficiaries. To avoid this problem, we made it very clear from the beginning of each interview that we did not represent any NGO. We presented our mission as a joint research project by the University of Bergen, Norway, and the Tribhuvan University of Kathmandu, aimed at mapping the living conditions of the residents in order to give policy advice to the authorities that would benefit *all* living in the area.[15]

3.5 Structure of the Interview

Interviews may be performed with little structure and open-ended questions. The respondent is thus free to focus on issues of relevance to him, and this may shed light on problems not even thought of by the researcher (Thagaard 1998:80). In contrast, an interview may be well structured, having questionnaires with fixed alternatives and closed-ended questions, and the sequence of questions determined in advance. A definite advantage of the latter approach is that it makes it easier to compare answers between individuals. Our approach lies somewhere between these two positions, a so-called *semi-structured* interview. Flexibility is the core of this method (Thagaard 1998:81). We decided in advance what types of economic information we wanted to gather regarding the household's economy. However, the sequence of questions was flexible, and we were open to listening to stories and other information that would

[15] In many developing countries, universities are considered to be benign institutions (Bulmer & Warwick 1983: 77).

increase our knowledge of the *kamaiya* labor institution. Our aim was to let the interview take the form of a "purposeful conversation" (Erlandson 1993:86). Each interview took on average 30–40 minutes. We never used the term "*kamaiya*" during the interview to avoid influencing the respondent's use of employment categories. To put the *kamaiya* issue on the table, we asked about their employment history. Preferably, we interviewed the husband, as he is considered to know most of the household's economic affairs. If he was not around, we tried to come back later. If he was still not there, we interviewed the wife or the eldest son.

3.6 Discussion of Methodology

The quality of a research methodology may be judged on four criteria: reliability, validity, representativeness and appropriateness to the research question (Bulmer & Warwick 1983: 10-11). A reliable method should give the same results even if it is applied by different researchers or at a different point in time. For instance, one could argue that case study research is not reliable, since the results depend, to a large extent, on the case selected or the researcher's personal observations. A standardized interview might increase the reliability of the results. However, standardized interviews may be problematic in terms of reliability if the respondents do not understand the questions or answer strategically. Validity refers to whether or not the data obtained measure what they are intended to measure. The representativeness of the results concerns to what extent conclusions from the study may be generalized to a larger population. According to Bulmer & Warwick's last criterion, a good research design should produce relevant data and results able to answer the research question. In the next sections, I shall discuss how our methodology performs on these criteria.

Reliability

Our respondents were unfamiliar with English. Therefore, we needed to use translators, which may have caused mistakes and misunderstandings. We did not record our interviews on tape, but made notes. Inaccurate notes may have been a source of error.

It seems that we managed to avoid the problem of strategic answers from the respondents. They did not tell extreme life stories and seemed to be quite balanced and interested in giving us a realistic picture of their lives. We avoided this problem most likely by being very clear when we introduced ourselves and our purposes to the respondents. They never thought we were an NGO distributing benefits.

We found out that people were not shy to tell us about their lives. We thought that many would be reluctant to tell us about their economic affairs and working relationships, but this was hardly ever the case. Many of the life stories we heard were quite similar. Thus, if the respondents were reporting strategically about their lives, they would have had to coordinate their answers before we arrived. This is unlikely because our arrivals were mostly unannounced.[16] During the interviews, many spectators gathered. This may also have created peer pressure to tell the truth. Sometimes, the spectators disagreed openly and corrected the respondents. We were aware that influential people in the village could potentially create biased answers by their presence, but such people were, at least to our knowledge, rarely among the spectators.

Another challenge was that of inaccurate answers. People often gave inconsistent and very approximate answers, or changed their minds during the interview. When we were faced with inconsistent answers, we would try to ask questions to clarify these inconsistencies. Sometimes, this was enough to solve the problem, but not always. Some of our questions focused on events that had happened many years ago. To recall details from a long time ago was probably challenging for many of the respondents and this might have been another source of error.

Validity

The data we collected were primarily economic. One could argue that economic data are not sufficient to fully understand the *kamaiya* labor institution since it includes also many non-materialistic elements. However, during the interviews we were not only concerned with economic data but also asked questions about non-economic aspects of the *kamaiya* labor institution.

One may question whether a household or an individual is the right unit of analysis in this particular context. We interviewed the husband in the household assuming that he is the most important decision maker in the family and also the best source of information regarding the decisions made by the household. One might as well argue that the household members behave more as individuals and are to a smaller extent concerned with the interests of the other household members. There is an ongoing debate on how household allocation decisions

[16] Our arrival could have been known to the villagers where we needed permission from the Maoists to enter.

may be predicted. There are two groups of household allocation models: unitary and collective (Quisumbing & Maluccio 2000). The unitary model suggests that the household's resources are pooled and allocated according to a common preference of the household. This model is increasingly being challenged empirically by collective models where household decisions are made through bargaining between the household members (see Quisumbing & Maluccio 2000 for discussion).

Representativeness

Many of the households in our samples were impossible to find or had moved. In fact, we were not able to interview 30.5% of the households in the random samples (see section 4.2). If the reasons why these households were absent had to do with factors of interest for our research question, then the missing cases would create a biased sample and general conclusions based on the sample would be problematic. For example, former *kamaiyas* might have been forced to migrate due to poverty and this could be the reason why we were not able to find them. This is likely to have been the case and the samples are likely to be biased. Too general conclusions based on the samples are therefore problematic.

The Maoist conflict forced us to select areas that were less affected by the conflict. This might have caused a biased selection of VDCs, as the presence of Maoist guerrillas could be a response to poverty and exploitative labor relations.

Another problem our methodology presents is that information about households is not always complete. We failed to obtain data concerning all the variables for all the households. This reduces the number of units our estimates are built on and makes the estimates more uncertain.

The appropriateness to the research question

The aim of this study was to examine how a ban on *kamaiya* contracts had affected the living conditions for the *kamaiya*. The methodology chosen was a blend between quantitative and qualitative approaches. Given the constraints in terms of time and resources, this combined approach was sufficient to gain knowledge of how the ban had affected the lives of the *kamaiyas*. However, more precise quantitative estimates would have been possible with more data covering more VDCs.

3.7 Conclusion

This chapter has explained our choice of methodology. We chose to perform semi-structured interviews with respondents from random samples. The advantage of our methodology is that it provided us with a qualitative understanding of the *kamaiya* system and insight into how former and present *kamaiyas* perceived and perceive the *kamaiya* system. The weaknesses of our methodology include the possible problems of generalizability and the potential sources of error discussed above. Construction of precise quantitative statistical estimates is thus problematic. The estimates should only be seen as suggestive or qualitative. The data are not accurate enough for a formal statistical testing of hypotheses. However, the data will shed light on the hypothesis derived in chapter 2.

4. Data from the Fieldwork

4.1 Introduction

This chapter presents our findings from the field study, which will be compared with other studies on the same subject. The chapter is outlined as follows. Section 4.2 gives an overview of the context *kamaiya* laborers live in. Section 4.3 describes features of the *kamaiya* labor system. Section 4.4 gives an overview concerning the interventions that have taken place for *kamaiyas* since the *kamaiya* system was abolished in 2000. It also presents the living conditions former *kamaiyas* are facing now and how they perceive their new situation. I also investigate what kinds of contract have replaced *kamaiya* contracts.

4.2 The Context in which the *Kamaiyas* Live

Nepal is a least developed country landlocked between China and India. In 2005, 31% of the population in Nepal lived below the national poverty line[17] and the country ranked 195th in the world in terms of GNI per capita.[18] Ecologically, Nepal is divided into three different zones: the mountains, the hills and the plains. The latter is called Terai and has most of Nepal's cultivable land. This part of the country is often referred to as the "bread basket" of Nepal. The population is increasing in this area due to migration from the hills and the mountains. Agriculture is the main economic activity in the country, employing more than 66% of the population according to the National Census in 2001. Our fieldwork was conducted in four districts of Western Terai (Fig. 4.1).

Table 4.1 shows the random samples. Each column represents a sample from a ward in a VDC. All samples have several missing cases. In total, we managed to find and interview 69.5% of the intended respondents. In the random samples, we found in total 3 present *kamaiyas*, 23 former *kamaiyas*, 1 present *kamaiya* landlord and 9 former *kamaiya* landlords. In 2000 the Department of Land Reform in Nepal estimated the proportion of *kamaiyas* in each VDC. In general, our samples had a higher proportion of ex-*kamaiyas* than the estimate made by the Department of Land Reform. This is reasonable since we chose wards within the VDC that had high proportions of Tharus (see section 3.3).

[17] Nepal at a Glance. World Bank 2006.
[18] World Development Indicators database 2006, World Bank.

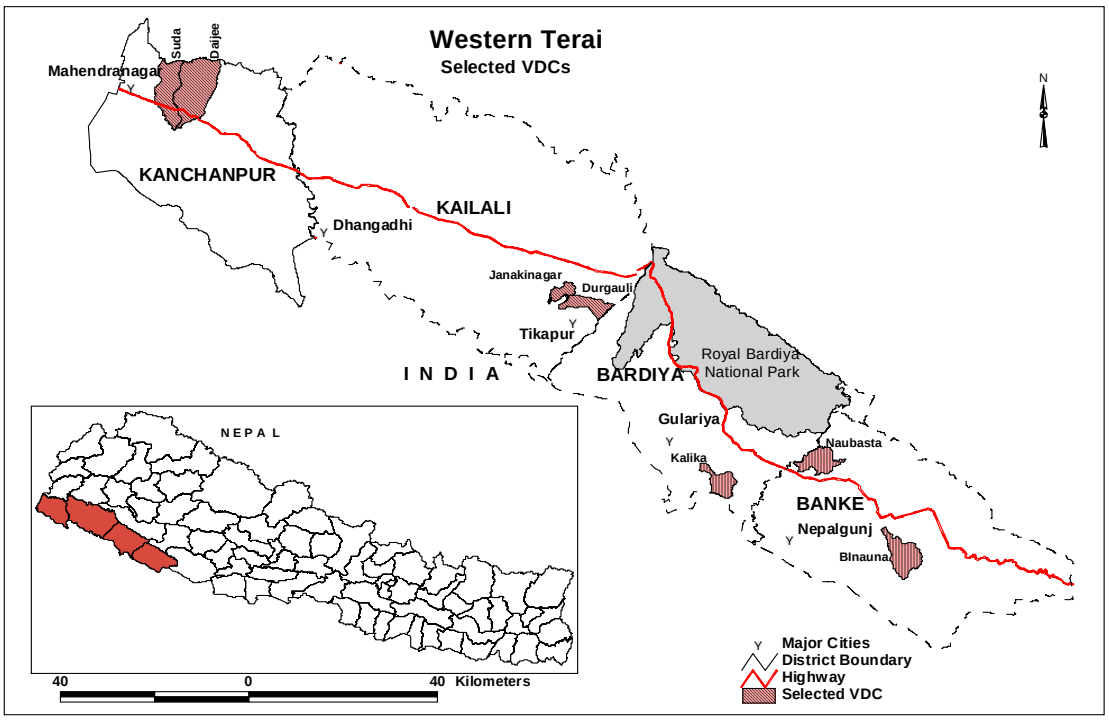

Figure 4.1. Map showing VDCs where fieldwork was conducted

Source: Central Department of Geography, Tribhuvan University, Nepal. Prepared by Madhab P. Bhusal.

Table 4.1. Overview of random samples

	Kalika/2	Kalika/1	Naubasta/5	Binauna/8	Durgauli/4	Janakinagar/8	Suda/1	Suda/2	Suda/3	Suda/7	Daijee/1	Total
Sample size	24	24	29	26	22	24	25	22	23	24	23	**266 (69.5%)**
Moved/not found	2	5	9	15	9	9	6	3	3	13	6	**81 (30.5%)**
Realized size of sample	22	19	20	11	13	15	19	18	20	11	17	**185 (100%)**
Present *kamaiyas*	0	1	1	0	1	0	0	0	0	0	0	**3 (1.6%)**
Present *kamaiya* landlords	0	0	0	0	0	0	0	0	0	0	0	**0 (0%)**
Ex-*kamaiya* landlords	0	1	0	2	1	2	2	0	1	2	0	**11 (6.0%)**
Ex-*kamaiyas*	5	4	2	2	3	3	2	2	0	0	0	**23 (12.4%)**
Proportion ex-*kamaiya* in sample	0.23	0.21	0.1	0.18	0.23	0.2	0.11	0.11	0	0	0	
Proportion of *kamaiyas* in VDC*	0.08	0.08	**-	0.14	0.08	0.25	0.14	0.14	0.14	0.14	0.04	
Households in VDC	1516	1516	-	790	1864	807	1744	1744	1744	1744	3627	**15352**
Households in ward	215	171	-	129	156	142	124	90	140	168	209	**1376**

Source: Field Survey, February-March 2005.

* Proportion of *kamaiyas* (ABCD), according to the census undertaken by the Department of Land Reform in 2000, in Sharma and Sharma (2003).

** Sampling was done during a visit to an election office. Data were not available.

In addition to the random samples, 44 extra interviews were undertaken (Table 4.2). In these samples, there were 37 former *kamaiyas*, 4 present *kamaiyas*, 1 former *kamaiya* landlord and 2 present *kamaiya* landlords. The extra interviews were conducted in the same wards as the random samples, or in camps for former *kamaiyas*.

Table 4.2. Overview of non-random samples

	Kalika	Neubasta	Tikkapur	Durgauli	Janakinagar	Rajhena	Daijee	%	Total
Ex- *kamaiyas*	2	0	5	0	0	8	22	84.1	37
Present *kamaiyas*	0	3	0	0	1	0	0	9.1	4
Ex-*kamaiya* landlords	0	1	0	0	0	0	0	2.3	1
Present *kamaiya* landlords	0	0	0	1	1	0	0	4.5	2
Total	2	4	5	1	2	8	22	**100**	**44**

Source: Field Survey, February-March 2005.

Table A.1 in Appendix to Chapter 4 gives an overview of the general economic context of villages where the former and present *kamaiyas* live. The median landholding for households varies between 10 and 20 kattha.[19] In each sample, there are typically 5–7 sharecroppers. The typical size of the land sharecroppers operate for the landlord is 20 kattha. The wage level is approximately 70 rupees per day, in addition to one full meal.[20] There are regional differences in the wage level. Wage levels are higher in the westernmost VDCs, for example Suda. There also seem to be gender differences in wages, with women receiving less.

4.3 The *Kamaiya* Labor System

4.3.1 General Features of the *Kamaiya* Contract

This section aims to describe the general characteristics of the *kamaiya* labor institution based on our interviews. Our findings will be compared to results from previous research. In the *kamaiya* system, a landowner employs a farm laborer, the *kamaiya*, on an annual basis. During this period, the *kamaiya* commits his labor exclusively to one landlord. We observed no general rule as to whether other family members also worked for the same landlord. It has been suggested that, on average, 1.5 members of the *kamaiya* household work for the landlord (Sharma 1998:30). This seems reasonable based on the general impression from our

[19] 5 kattha = 135x135 square feet = 0.17 ha.

interviews. We observed that the wife of the *kamaiya* often did domestic work for the landlord, sometimes compensated by a wage; at other times, her labor was a part of her husband's labor contract and wage. We found many cases where the wife only worked for half a day for the landlord, thus giving her an opportunity to seek work at other places once her job at the landlord's house was finished. In some instances, the children of the *kamaiya* worked as shepherds for the landlord, and many reported that this had been the starting point in their lifelong "career" as *kamaiyas*. However, it appeared to us that children working as *kamaiyas* were more common during and before the early 1990s. Table 4.3 depicts how often the wife of the *kamaiya* had to work for the landlord.

Table 4.3. Involvement of *kamaiyas'* wives in *kamaiya* cases

Modality of involvement	Observations	%
Full time	24	38.7
Part time	11	17.7
Not involved	27	43.6
Total responses	62	100.00

Source: Chitrakar (2006:40).

The *kamaiyas* reported 12-13 working hours every day, with only short breaks during the day. They were only allowed to take a few days off annually. The movements of the *kamaiya* were restricted and they had to get the landlord's permission to leave the farm. When there was no work to be done on the fields, the *kamaiyas* did other work on the farm. We also heard of cases where the landlord "rented out" his *kamaiya* to other landlords if there was a lack of work on his own farm. This arrangement did not lead to any extra payment to the *kamaiya*.

The *kamaiya* system leaves the landlord with obligations too. Apart from paying wages (Section 4.3.2), he has to see to his *kamaiya*'s well-being. It is expected that the *kamaiya* is helped in times of crisis. The landlord must, for instance, provide an emergency loan if the *kamaiya* household faces a food shortage. Sick *kamaiya* family members also expect to receive help and medical treatment from the landlord. These obligations have also been observed by other researchers (Holm & Løkke Rasmussen 1999:75). In some cases, a hut for the *kamaiya* household was provided by the landlord, but approximately half of the former *kamaiyas* in our sample owned their own home when they were *kamaiyas*. A summary of the *kamaiya* contract is given in Table 4.4.

[20] We made a distinction between a full meal (1) and a small meal (0.5).

Table 4.4. A summary of the *kamaiya* contract

Terms for the *kamaiya*

- **The contract terms last for one year.**
- **Works for 12-13 hours daily.**
- **Not allowed to work for others.**
- **Sometimes the wife and children of the *kamaiya* work for the landlord.**
- **Restrictions on mobility. Cannot leave the landlord's property without permission.**
- **Able to leave the landlord if he repays his debt.**

Landlord's obligations

- **Provides fixed annual wage. Meals for the *kamaiya* are mostly included.**
- **In some cases, provides a small house for the *kamaiya*.**
- **Provides consumption credit.**

Source: Field Survey, February-March 2005.

4.3.2 Different Modes of Wage Payment

Several remuneration systems for *kamaiya* laborers were observed. I have grouped them into four categories: payment in cash, payment in kind, payment in kind plus a plot of land, and share of output.

Cash Payment

An estimate from Sharma (1998:37) suggests that only 9.2% of the *kamaiyas* receive annual cash payments. Nevertheless, we got the impression from our respondents that annual cash payments have been used more frequently since the ban on *kamaiya* contracts was introduced. For instance, two of the present *kamaiyas* we interviewed were paid in cash. For one of them, the payment had switched from annual to monthly. These two received 10,000 rupees per year and 1,250 rupees per month. 4 out of the 23 ex-*kamaiyas* in the random samples and 7 out of the 37 ex-*kamaiyas* from the extra interviews used to be paid in cash. These contracts were ended in the period 1998-2004. To find a typical value for these contracts I converted all the cash payments to, for example, 2004 prices by using a price index.[21] After correcting for inflation the median fixed cash payment is then approximately 7,500. Sharma (1998:36)

[21] I use the price data on rice/paddy in Nepal from the Food and Agriculture Organization of the United Nations. Downloaded from their web page 25 September 2006. Based on price data from 1991-2003, I calculate the average price increase per year, which is 6%.

suggests a lower estimate for cash payments, i.e., 3,000–4,000 rupees per year (4300-5700 rupees when adjusted for inflation).

Annual Payment in Kind

In this kind of payment, the *kamaiya* is given a fixed amount of crop, typically 720kg of paddy, supplemented by some maize, wheat, lentils, vegetables, salt, oil and clothes. Many *kamaiyas* reported the landlord gave them a fixed amount of paddy and a variable amount of a different crop, depending on how good the harvest had been. To estimate the value of this payment, I multiplied the amount of each crop given to the *kamaiya* by typical market prices we gathered in the areas we visited.[22] The median value of the fixed amount of crop given to the *kamaiya* is 6,800 rupees in the random samples and 5,000 in the non-random samples. Merging the two types of sample, the median value is 5,900 rupees and the 25% percentile and 75% percentile are 4,680 and 7,510 rupees respectively. This form of payment was the most common one.

Annual Payment in Kind and an Allotted Piece of Land

In this arrangement, the *kamaiya* is given one allotted plot, being allowed to keep the crop either for private consumption or to sell it on the market. The plot given to the *kamaiya* is typically 10 kattha. *Kamaiyas* receiving this form of payment do not normally receive meals, as the plot of land is supposed to provide enough food for his family. In addition to the plot, the *kamaiya* receives a fixed amount of crop, typically 720 kg of paddy, supplemented by some other crops. The value of the fixed crop they receive is very similar to the fixed in-kind payment. 5 *kamaiyas* had this mode out 23 ex-*kamaiyas* in the random samples and 4 out of 37 in the extra interviews of ex-*kamaiyas*. I have estimated the value of the output of this plot of land at 8,500 rupees. To obtain this estimate, I asked 25 farmers how much they produced on their land. This was multiplied by the aforementioned crop prices, which then gave a rough estimate of the value of having one kattha of land. A weakness of this estimate is that it does not take into account the costs incurred by the *kamaiya* when cultivating this plot.

[22] This estimate is based on prices in the harvest season as this is when in kind payment is received. I collected the prices from our respondents. These are typical prices and provide the foundation for my estimates: paddy, 6.5 Rs (rupees)/kg; oil seed, 23.5 Rs/kg; wheat, 7 Rs/kg; pulses, 22 Rs/kg; and maize, 7.5 Rs/kg.

Output Share

Under this contractual agreement, the *kamaiya* receives a fixed share of the crop, but his share is only one third or one fourth of the output. Usually sharecroppers get half of the crop. They usually have to assume their part of the investment costs as well, such as seeds, fertilizer and sometimes irrigation. *Kamaiyas* who receive a share of output do not have to consider these costs. Some respondents told us that groups of *kamaiyas*, for example 5-10 *kamaiyas*, used to work on a big land plot and received one third of the crop. More recent *kamaiyas* who got a share of the crop typically said that only one or two *kamaiyas* worked together on a piece of land. We asked some *kamaiyas* who got a share of the crop how much this one third usually equated to in crop. Their answers were very similar to those who got a fixed annual crop as wages. The median value of the share of the output received by the *kamaiya* was 7,300 rupees. This estimate is only based on 5 *kamaiya* cases, all from the extra interview samples.

4.3.3 The Value of Meals

Most of the *kamaiyas* (85%) reported that they receive daily meals from the landlord as part of their payment. The question is how much these meals are worth. In one of the modes of payment described above, the *kamaiya* was given a land plot to cultivate by himself instead of meals. The value of the crop from this land plot was estimated at 8,500 rupees. If we assume that *kamaiya* contracts are more or less equal in value, despite the different modes of payment, 8,500 rupees gives an indication of how much the meals are worth for one *kamaiya* in one year. However, this estimate is probably too high, since the cost of cultivating the land plot is not subtracted.

One landlord we spoke to used to give the *kamaiya* a choice between meals every day or 8–9 quintals of paddy per year. This implies that the value of meals is, approximately, 6,000 rupees per year. Typically a *kamaiya* receives two full meals and one small meal.[23] Thus, according to this landlord, one full meal is worth 6.57 rupees.[24] This is a low estimate. Casual agricultural workers reported that they were sometimes given a choice between meals and wage combined, or no meals but a higher wage. The difference between these two options suggests that the value of one full meal ranges from 10 to 20 rupees. Other studies have suggested that the value of a snack meal (0.5 meal) is 9 rupees and a full meal, 15 rupees (Hatlebakk 2004:20). Now, let us say that a meal is worth 15 rupees and the *kamaiya* gets 2.5

[23] Here, a small meal is estimated to be half the value of a full meal.
[24] 6,000/(365*2.5).

meals per day. The total value of all the meals would thus be 13,688 rupees, which seems to be an unreasonably high estimate. If we choose a lower value for a meal, say 10 rupees, the annual value of all the meals is 9,125 rupees, which is still very high. I argue that the lower estimate at 6,000 is the most realistic one. The reason is that estimates based on the valuation of meals derived from a casual wage seem to be too high. In addition, the value of meals in long-term contracts and short-term casual wages may not be directly comparable.

The discussion above suggests that the meals probably constitute more than 50% of the value of the *kamaiya* contract. In the remaining part of this thesis I use 6,000 rupees as an estimate of the total annual value of the meals in the *kamaiya* contract. Table 4.5 gives an overview of the different estimates of the value of a *kamaiya* contract. Due to the large number of observations, the estimates involving a fixed pay in kind are probably more reliable. This suggests that a *kamaiya* contract is worth, approximately, 12,000 rupees. All the estimates are very sensitive to how meals are valued, since meals constitute a large part of the wage of the *kamaiya*. Hatlebakk (2006) has also estimated the value of a *kamaiya* contract and his estimates are similar.

Table 4.5. *Kamaiya* contracts, different modes of payment

	Median	25% percentile	75% percentile	Value of meals/ value of land plot	Obs.	Value of *kamaiya* contract	Distribution in Sharma 1998:37
Cash	8,500	5,500	10,300	6,000	8	14,500	**9.2%**
Fixed wage in kind	5,800	4,700	7,500	6,000	52	11,800	
Fixed wage in kind and land plot	4,700	4,700	5,900	8,500	9	13,200	**54.7%**
Output share	7,300	5,900	9100	6,000	5	13,300	**36.1%**
Total					**74**		**100%**

Source: Field Survey, February-March 2005.
Note: The estimates in this table are based on fewer observations than the total number of the *kamaiyas* and *kamaiya* landlords reported in Tables 4.1 and 4.2. I have excluded some of the observations due to low data quality.

The *kamaiya* contract also comprises other benefits that are not included in the estimates above. These benefits are a residential hut, access to credit, medical treatment and clothes. Valuation of these benefits is complicated and no attempt is made here to do so, as they do not represent the main components of the *kamaiya* contract. However, there is no question that these benefits further increase the value of the *kamaiya* contract.

4.3.4 Change of Landlord

The duration of the *kamaiya* contract is one year. At the festival of Maghi, held in the month of Magh (January/February), *kamaiyas* may change landlord. Reasons for such change can be dissatisfaction on the part of the *kamaiya* or the landlord regarding contractual terms or work performance. Our respondents said they often ended the relationship when they were not satisfied with the landlord, for example, when the landlord failed to pay on time or demanded too much work. In order to be able to switch landlord, indebted *kamaiyas* needed to get a loan from their new landlord to repay the outstanding debt to the former. The total debt for the *kamaiya* thus remained the same, even after changing landlord. The ability to change landlord provides an outside option for the *kamaiyas,* however, only within the village where they live. Even though they cannot easily escape from the *kamaiya* system, their outside option offers them a limited degree of freedom to move between landlords. The negotiations between the *kamaiya* and the landlord were real in the sense that the *kamaiya* was not handed passively over to another landlord. The *kamaiya* uses this opportunity to increase his annual pay and improve the contract terms for himself. We heard stories where *kamaiyas* got offers from potential *kamaiya* landlords and used these offers to improve their contractual terms with their present landlord. Rankin (1999:30) also supports the idea that real negotiations took place annually between the *kamaiya* and the landlord.

We found that present *kamaiyas* used the opportunity to change landlords quite often. Some even changed landlords every year. It seems as though *kamaiyas* started to change landlord more often during the 1990s. Sharma (1998:35) concludes that 70% of *kamaiyas* stayed less than 5 years and 17% between 6 to 10 years with the same landlord.

4.3.5 Reasons for Becoming *Kamaiya*

To better understand the reasons why the *kamaiya* system exists, we asked the respondents why they became *kamaiyas* in the first place. Typical answers are listed in Table 4.6. Employment and food security through the *kamaiya* system seems to be an important reason. Entering a *kamaiya* contract may also be a solution to a financial crisis faced by the household.

Table 4.6 Reasons for becoming *kamaiya*

- *Lack of alternative employment opportunities, i.e., sharecropping and casual work*
- *No access to land. Landless*
- *Became* kamaiya *as a child*
- *Became* kamaiya *to survive*
- *His father was indebted and the son had to take over the loan and serve the same landlord*
- *Needed to take loan to get married*
- *Sudden economic crisis accompanied by a need for credit*

Source: Field Survey, February-March 2005.

Holm & Løkke Rasmussen (1999:68-73) make a distinction between *orthodox* and *unorthodox kamaiyas*. An orthodox *kamaiya* depends on the landlord for his household's subsistence to a larger extent than the unorthodox *kamaiya*. The remuneration system for orthodox *kamaiyas* makes it difficult to accumulate savings and the *kamaiya* perceives the system as a way to survive. A statement from one of the respondents in the field study illustrates the perspective of an orthodox *kamaiya*:

> (…) I became a *kamaiya*, because we did not have our own land. I am landless and houseless, so to get food, I work as a *kamaiya*. I have been working for the same *kisan* (landlord) in 30 years. My son is also working as a *kamaiya* for another *kisan*. We are a big family, when the family size grows; we have to work for food. (…) To change *kisan* is very hard work, so why take such types of risk to go to another *kisan* (Holm & Løkke Rasmussen 1999:68).

The unorthodox *kamaiya* household combines *kamaiya* work with alternative sources of income, mainly wage labor, but also income from migrated household members. When subsistence is secured for the household through a *kamaiya* contract, other household members may engage in more risky, and often more profitable, employment alternatives. Holm & Løkke Rasmussen suggest that *kamaiyas* need to become unorthodox *kamaiyas* in order to increase their total income and thus be able to escape the system. Increased income and savings would enable them to buy land and bulls. This would secure subsistence and at the same time serve as a signal to landlords that they are hard working, making them attractive to landlords offering sharecropping contracts. Sharecropping is considered a better option than being a *kamaiya*. Holm & Løkke Rasmussen observed that families with social responsibility for the elderly and children tended to be orthodox *kamaiyas*, whereas households with many male members capable of working were unorthodox *kamaiyas*.

Among our respondents we observed mostly unorthodox *kamaiyas*. Almost all had started to find alternative income sources for their households. Typically, the wife of the *kamaiya* worked part-time for others, aside from the *kamaiya* landlord.

4.3.6 Socio-economic Information on *Kamaiyas*

In total, 96% of *kamaiya* laborers belonged to the Tharu ethnic group (Sharma & Sharma 2003:7). However, not all Tharus are *kamaiyas*. The total Tharu population in Nepal was estimated at 1.53 million in the 2001 population census, which represents 6.8% of the total population (CBS 2003:97). The density of Tharus is especially high in mid- and far-western Terai. They are believed to be the original inhabitants of Western Terai and lived in the jungle before it was turned into agricultural land in the 1960s. Due to the eradication of malaria in the 1950s, many migrants from the hills and the mountains flocked to Western Terai in the following decades (Sharma 1998:11). Tharus were hired to work for the new landowners and they gradually slipped into debt bondage. Most of the present *kamaiyas* have ancestors who used to live in the district of Dang. Migration from the hills created pressure on the land in Dang, and Tharus moved and started to work for landowners in Bardiya, Kanchanpur and Kailali (Sharma 1998:12).

Rankin (1999:29-34) distinguishes between two types of *kamaiya* practise in these districts. The first type is found among Rana Tharus concentrated in Kailali and Kanchanpur. In this system, only 1 or 2 *kamaiyas* work for a *kisan* (landlord), who is often a small-scale subsistence farmer himself. The *kisan* works alongside the *kamaiyas* on the field and works the same hours as the *kamaiya.* There is not a large difference in status between the *kamaiya* and the *kisan*. The *kamaiya* is treated as a family member in the *kisan's* household. However, the *kamaiya* does not have the right to speak in political meetings in the village and he is seen as part of the *kisan's* wealth and property. The *kamaiya* rarely face violence in this kind of *kamaiya* practise. Nor is a *kamaiya* doomed to remain a *kamaiya* forever. It is possible for the *kamaiya* to settle his debts with the *kisan* and become a subsistence farmer through saving.

In the other type of *kamaiya* system, between a *kamaiya* and a *jamindar* (landlord), the terms for the *kamaiya* are generally worse. The working hours are longer and the landlord uses the *kamaiya*'s debt in a more manipulative way to prevent the *kamaiya* from changing landlord or accumulating savings in order to escape *kamaiya* status. Physical violence against the

kamaiya is also more common and is used by the landlord to maintain the *kamaiya* bond. The *jamindar* does not engage in farm work himself, but hires at least 3-4 *kamaiyas* to work on his large landholdings. These form the basis of his power and create a large gap in status between the *kamaiya* and the *jamindar*. Whereas the relationship between a *kisan* and a *kamaiya* may be seen a voluntary contract from which both parties benefit, the relationship between the *jamindar* and the *kamaiya* is based on a good deal of coercion.

Nepal is a Hindu kingdom, and people's social position and occupation are defined by caste. Tharus were defined in the legal code *Muluki Ain* in 1854 as alcohol drinking, touchable, but enslaveable (Holm & Løkke Rasmussen 1999:75). Although caste discrimination is prohibited, this ideology is deeply rooted in the population and decreases social mobility. Traditions hold that Tharus are related to farming and can become *kamaiyas* in times of economic difficulty. Non-Tharus would not consider becoming *kamaiyas* if facing the same difficulties, suggesting that a person's position in the system strongly decides the person's livelihood opportunities (Holm & Løkke Rasmussen 1999:75). Caste ideology is probably an important determinant of the livelihood opportunities of the *kamaiyas*.

In an environment where the majority works in agriculture, land is the major production factor and serves as an indicator of a person's social position within the society. Sharma (1998:33) states that 60% of *kamaiyas* do not possess any land. Those with land fall into two categories: those who have their own land, and those who have captured public land (Ailany), that is, they do not have any legal documents supporting their property claims. In 2003, 82% of the former *kamaiya* households had land, their average landholding being 5 kattha (Sharma 2003:12). Our data also suggest 5 kattha as a median size of landholding for former *kamaiyas* and that the 25% bottom percentile has 2 kattha or less. The increased landholding among former *kamaiyas* is linked to the *kamaiya* land reform that took place after their emancipation (section 4.4.1). Ex-*kamaiyas* still own much less land than the general population. The median landholding of a former *kamaiya* in the random samples is 5 kattha. The overall median landholding in our samples is 15 kattha (table in Appendix to Chapter 4).

Among all ex-*kamaiyas* from the random samples, 67% had loans from their landlord when they ended their contracts (24 observations). The median debt size was 5,000 rupees (14

observations).[25] Sharma (1998:33) mentions that almost half of the *kamaiyas* were indebted and that the average loan size was 5,000 rupees.

4.4 The Period since the Ban on *Kamaiya* Contracts

4.4.1 The Intervention by the Government

Already in 1996, a census was conducted by the Department of Land Reform to document the number of *kamaiyas* (Sharma 1998:30). They counted 15,152 *kamaiya* households, and plans were made and partly implemented to distribute land to these households. This census was heavily criticized by NGOs, who claimed the figures underestimated the number of *kamaiyas*. After the ban on bonded labor of 17 July 2000 it was therefore decided to conduct another survey of *kamaiyas*. Registration of *kamaiyas* took place 2–3 months following the declaration of 17 July. A committee consisting of representatives from the Land Reform Office, the district chairman and representatives from NGOs visited VDCs where there were *kamaiyas* and considered applications for *kamaiya* status. Their visit was announced in advance. Landlords had to sign a form confirming that the *kamaiya* had actually served as a *kamaiya*. Some of the landlords refused to sign, most likely because they had a bad relationship with their *kamaiyas*. The *kamaiyas* were divided into four groups. Homeless and landless families were grouped under category A. Families with a house and a small plot of unregistered land were grouped as B. Families with a house and a plot of registered land of up to 2 kattha were grouped as C; and families with a house and more than 2 kattha of registered land fell under category D. Altogether, 18,288 *kamaiya* households were identified through this process (Sharma 2003:7). The government promised to give "up to 5 kattha of land" to landless *kamaiyas* of category A and register the land for *kamaiyas* of category B. Distribution of land has taken place, but there are many still waiting while living in temporary camps.In 2002, NGOs urged that another registration be undertaken because it was believed that many *kamaiyas* had been left out in 2000. Another round of registration was conducted in 2002, and approximately 14,000 new applicants claimed to be ex-*kamaiyas* and eligible for land. In the district of Kailali alone, 7,397 persons applied for land.[26] However, only half of the applicants were granted status as *kamaiyas* and became entitled to receive land. Many of the applicants were rejected because they failed to prove their status as ex-*kamaiyas*. It is very

[25] The proportion of ex-*kamaiyas* with debt was higher among the *kamaiyas* in the extra interviews and the size of the debt was higher.
[26] This information was obtained from the Land Reform Office, Dhangadhi, Kailali, in March 2005.

likely that many thought they could take advantage of the situation and saw this as an opportunity to get land for free. To our knowledge, none of those who were accepted as ex-*kamaiyas* in 2002 have received land so far. It remains an open question whether it is possible to find land for them. Representatives at the Land Reform Office in Dhangadhi argued that there was no more land available in the area.

4.4.2 Livelihood Strategies after the Liberation

In recent years, *kamaiyas* have left their landlords in great numbers. Based on the interviews, it seems that the ban announced in July 2000 is the main reason for this. Table 4.7 shows that a large number of *kamaiya* contracts ended in 2000 and in subsequent years. However, a considerable number of *kamaiyas* left the *kamaiya* institution before the abolition in 2000, as many as 44% in the random samples. This figure may give the wrong impression. The real change in the number of *kamaiya* contracts is not found by looking only at how many *kamaiya* contracts are ended but also at how many workers become *kamaiyas* during the same period. Before the ban in 2000 there were workers who became *kamaiyas*. After 2000 very few became *kamaiyas*. Thus, the decrease in *kamaiya* contracts was very large after ban.

Still, the data gives suggestive evidence that the *kamaiya* labor institution was about to decline before the ban was introduced in 2000. The way out of the system prior to 2000 was to repay the debt, which some *kamaiyas* obviously managed to do. This illustrates two points. Firstly, the change from *kamaiya* contracts to new labor contracts had started before 2000. Secondly, *kamaiyas* were in practice able to end the *kamaiya* contract. Those who changed to other labor contracts before 2000 typically said that they just did not want to be *kamaiyas* any longer. Few of these emphasized debt as an obstacle to ending the contract.

Table 4.7. Year *kamaiyas* ended their *kamaiya* contract

Year	Random sample	Random sample (%)	Extra interviews	Extra interviews (%)
-1990	2	8.7	0	0.0
1991-1994	2	8.7	1	3.2
1995	2	8.7	1	3.2
1996	1	4.3	1	3.2
1997	0	0.0	1	3.2
1998	2	8.7	0	0.0
1999	1	4.3	0	0.0
2000	7	30.4	13	41.9
2001	2	8.7	10	32.3
2002	1	4.3	2	6.5
2003	1	4.3	0	0.0
2004	2	8.7	2	6.5
Total	*23*	*100*	*31*	*100*
Contracts ended prior to 2000	10	44%	4	13%

Source: Field Survey, February-March 2005.

The declaration of 2000 stated that the *kamaiyas* were not obliged to pay their debt. Debt no longer tied them to their landlord. The landlords were angry at losing their financial claims, but in general accepted the cancellation of the debt. We found that half of the *kamaiyas* chose to repay their debt (16 observations).

After the declaration some *kamaiyas* left immediately, while others stayed with the landlord for some years. Many highlighted the sense of insecurity they felt at that time, lacking both house and land. An overview of their strategies is given in Table 4.8. Table 4.9 shows what kind of labor contracts former *kamaiyas* are engaged in now. Around 41% of the ex-*kamaiyas* from the random samples now work as sharecroppers. The rest work as casual laborers in the agricultural or urban sector.

Table 4.8. Strategies for liberated *kamaiyas*

- Worked one or two years for the same landlord, but are now casual workers. Many were allowed to stay in the same house as when they were *kamaiyas*. Later on, they moved to camps or received a small land plot from the government.
- Rented a place in a nearby city and worked as casual laborers.
- Moved to temporary camps and worked as casual laborers. Many still live in these camps.
- Moved to temporary camps and later moved to a plot of land provided by the government.
- Stayed in their own house and went for casual work either in agriculture or other unskilled industrial work.
- Are still kamaiyas (few).
- Were offered sharecropping on a 50–50 basis by the previous landlords

Source: Field Survey, February-March 2005.

Our data seem to indicate that the *kamaiyas*' dominant strategies right after the abolition were to work for the same landlord for a couple of years as causal workers or to do casual work and live in their own home. Many also started to work as sharecroppers for the same landlord.

Table 4.9. Occupation and landholding of liberated *kamaiyas*

	Random sample	Random sample (%)	Extra interviews	Extra interviews (%)
Sharecropping*	11	40.7	4	11.8
Casual labor – agricultural sector	3	11.1	3	8.8
Casual labor – non-agricultural sector	4	14.8	8	23.5
Casual labor – both sectors	8	29.6	18	52.9
Other	1	3.7	1	2.9
Total	***27***	***100***	***34***	***100***
Median land given to sharecroppers	60 kattha		27.5 kattha	

* Sharecroppers very often do casual work as well.
Source: Field Survey, February-March 2005.

We asked the ex-*kamaiyas* which, out of the three following employment alternatives, they preferred: casual labor, sharecropping (equal division of output) or a *kamaiya* contract. The answer is shown in Table 4.10.

Table 4.10 Preferences of labor contract among former *kamaiyas*

	Yes	No	Indifferent	Total	Obs.
Is a *kamaiya* contract better than casual work?	37.5%	50%	12.5%	100%	32
Is a *kamaiya* contract better than sharecropping?	12.9%	87.1%	0%	100%	31

Source: Field Survey, February-March 2005.
The answers are based on respondents from both the random samples and the extra interviews.

Sharecropping was clearly the most popular labor contract, preferred to *kamaiya* contracts by 87% of the respondents. Opinion among the respondents seems to be less clear on whether casual work is better than a *kamaiya* contract. Half of the respondents thought casual work was better, whereas 38% thought the opposite. The rest were indifferent between the two options. These findings should be taken with a pinch of salt. For example, some respondents might have misunderstood the question and thought they were supposed to compare having casual work every day and being *kamaiya*.

4.4.3 Ex-*kamaiyas*' Evaluation of their Present Situation

We asked the ex-*kamaiyas* to list the advantages and disadvantages of the *kamaiya* system. The answer is shown in Table 4.11. We also asked them to compare the life they had when they were *kamaiyas* to their lives after their emancipation. Their perspectives are listed in Table 4.12. Many ex-*kamaiyas* emphasized that they now worked fewer hours and greatly

valued having time off. Activities such as washing clothes and taking care of their personal hygiene were given more time. Although not many *kamaiyas* are left, we found some, and we asked them why they were still *kamaiyas*.

Table 4.11. Former *kamaiyas'* evaluation of the *kamaiya* system

Advantages

- Got loan
- Easy to get enough food and medicine

Disadvantages

- Worked a lot
- The landlord often got very angry
- The landlord always wanted to know the *kamaiya's* whereabouts

Source: Field Survey, February-March 2005.

Table 4.12. Evaluation of the post-*kamaiya* era

Ex-*kamaiyas'* evaluation of their present situation as opposed to when they were *kamaiyas*

Advantages

- ***More leisure time now***
- ***More time for personal hygiene and washing clothes***
- Freedom to work when and where he wants
- Higher wage
- ***Do not work so hard now***
- A feeling of being freer
- Can cultivate his own land, does not have to work for others
- The satisfaction of deciding how to spend his own time

Disadvantages

- Not enough food
- Difficult to get loans

Answers in bold were most common.
Source: Field Survey, February-March 2005.

4.4.4 Perspectives from Present *Kamaiyas*

Although not many, some *kamaiyas* are still left. One of them, Bhagi Ram Tharu, who became a *kamaiya* as a young boy, explained to us the typical motivation for continuing the *kamaiya* relationship. He is landless, and in his opinion he will not get any casual work, and if he does, it will only be for a few days per year at the most. He needs a guarantee that he will get enough casual work before he will end his *kamaiya* relationship. He was not present when the registration committee visited his VDC and missed the opportunity to apply for land. He

said that he does not want to be a *kamaiya*, but that he did not see any other options. Table 4.13 shows other reasons why present *kamaiyas* still prefer this labor contract.

Table 4.13. Reason for still being a *kamaiya* today

- *Too old to stop and find something else to do*
- *Sharecropping is too difficult to manage. It is difficult to get oxen, which are required by many landlords if you want to be a sharecropper*
- *Cannot ride a bicycle. Therefore, cannot get to town nearby to seek alternative employment*
- *Being* kamaiya *provides a permanent income*
- *Right after the emancipation, some* kamaiyas *did not know that there were other employment alternatives. They actually had to be told about this opportunity*
- *Has no land and has been left out of the land reform program*
- *Many children to feed*
- *Did not want to take risk because there is no certainty about finding casual work*

4.4.5 The Landlords' Perspectives

Landlords generally accepted the new ban on *kamaiya*, even though protests were reported, especially in Kailali (Sharma 2001:10). The annulment of debt was especially hard to accept for many landlords. Most landlords have changed the working conditions of their laborers, and many have switched to sharecropping. Others employ casual workers when the need arises. Yet, there are still a few that are not frightened by the threat of punishment and employ *kamaiyas*. We did not hear about any landlords who had been given penalties for employing a *kamaiya*. A landlord who still wanted to employ *kamaiyas* told us it was very difficult to find people who wanted to work as *kamaiyas*. One landlord admitted that he thought it was all right that the *kamaiyas* became free and did not have to work such long hours any longer.

We noted that, in general, landlords were more powerful many decades ago when one landlord could have very large landholdings and could hire more than 10 *kamaiyas* to cultivate his land. Just before the abolition in 2000, however, landlords usually hired one or two *kamaiyas*. The *kamaiya* labor institution might have started in a setting with more unequal land distribution. For instance, we heard stories about landlords who used to employ *kamaiyas* in large numbers on big land plots (see Rankin 1999:34-5).

4.5 Summary

In the *kamaiya* labor institution the laborer works on the farm of a landlord in exchange for a fixed annual payment and daily meals. The landlord also offers the *kamaiya* other benefits,

such as clothes, shelter, credit, and sometimes the landlord also covers his health expenses. The *kamaiya* works long hours, 12–13 hours per day, and has only a few days off during the year. During the contract period of one year, the *kamaiya* cannot work for others. The *kamaiya* system has an element of patronage, since the landlord has to look after the *kamaiya*'s wellbeing. The majority of the *kamaiyas* were paid in kind with a fixed amount of crop. I estimate the annual value of a typical *kamaiya* contract at approximately 12,000 rupees per year, measured in 2005 prices, with probably more than half of the value of the contract comprising daily meals. Some *kamaiyas* managed to repay their debt and escape the system before the ban in 2000, but most of them left the system at the time of the abolition in 2000.

A majority of the former *kamaiyas* now work as casual laborers in either the agricultural or the urban sector. Our estimate is that 41% of the former *kamaiyas* have become sharecroppers. According to former *kamaiyas*, being a sharecropper is considered much more economically beneficial than being a *kamaiya*. However, *kamaiya* contracts and casual work are considered relatively equivalent. Former *kamaiyas* who are now casual workers are ambiguous when it comes to describing any degree of improvement in their welfare after their emancipation. Their income is now more uncertain and they have difficulties in finding sufficient casual work to get enough food for their families. By and large, the ex-*kamaiyas* who are now casual laborers conclude that their lives have improved slightly and underscore that their lives now involve much less work and more leisure. However, their food security has worsened and credit is not as easily available as before. In general, *kamaiya* landlords accepted the ban on bonded labor, and they have substituted *kamaiya* contracts with sharecropping, or cultivate the land themselves and hire casual labor when they need it.

Appendix to Chapter 4

Table A.4.1 Summary statistics on landholdings, wage and labor contracts by ward, random samples

	Kalika/2	(obs)	Kalika/1	(obs)	Naubasta/5	(obs)	Binauna/8	(obs)	Durgauli	(obs)	Janikanagar	(obs)
Landholding												
Landholding, max. (kattha)	134	22	120	18	100	20	240	11	80	13	150	15
Landholding, min. (kattha)	0		1		0		1		1		1	
Landholding, mean	20.2		25.2		22.6		40.9		23.8		27.9	
Landholding, median	9.5		10		11.75		15		15		22	
25% percentile	5		3		2.5		6		2		4	
75% percentile	17.5		34		30		40		30		34	
Gini coefficient	0.603		0.609		0.595		0.665		0.555		0.539	
Labor relations												
Number of sharecroppers	5		6		9		4		2		6	
Rented land cultivated by sharecroppers, median	20	5	35	6	20	9	18	4	60	2	22	6
Number of landlords renting out to sharecroppers	0		1	1	-		1	1	2	2	4	4
Working for other farmers	18 (82%)	21	13 (72%)	18	15 (83%)	18	6 (55%)	11	2 (15%)	13	8 (53%)	15
Farmers hiring land workers	11 (52%)	22	6 (33%)	18	3 (50%)	6	4 (36%)	11	4 (33%)	12	2 (13%)	15
Agricultural wage, men												
Pay harvest season, median	65	17	60	13	70	10	60	6	100	3	70	9
Meals harvest season, median	1	15	1.5	13	2	1	2.5	5	-		-	
Pay planting season, median	70	16	70	8	70	9	60	5	100	5	70	9
Planting season meals, median	1	15	1.25	8	1	2	2.75	4	-		-	
Agricultural wage, women												
Pay harvest season, median	60	11	60	3	70	3	55	3	80	3	70	6
Meals harvest season, median	0.5	9	1.5	3	2	1	2.5	3	-		-	
Pay planting season, median	60	15	60	11	70	8	55	7	80	5	70	7
Planting meals season, median	0.5	11	1	11	1,5	1	2.5	6	-		-	

5 kattha = 135 x 135 square feet = 0.17 ha.
100.00 rupees equals approximately £0.73 (October 2006).

This table continues on the next page.

Table A.1. Summary statistics on landholdings, wage and labor contracts by ward, random samples (continued)

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	Suda/1	Observations	Suda/2	Observations	Suda/3	Observations	Daijee/1	Observations	Random samples merged	Observations	Non-random sample	Observations
Landholding												
Landholding, max. (kattha)	160	19	35	18	80	20	90	17	240	184	24	23
Landholding, min. (kattha)	0		1		1		0		0		0	
Landholding, mean	29.7		12.4		25.8		19.8		24.5		8.0	
Landholding, median	20		10		23		12		15		5	
25% percentile	6.5		5		9.5		7		5		1	
75% percentile	40		18		36.5		22		30		15	
Gini coefficient	0.603		0.609		0.595		0.665		0.555		0.539	
Labor relations												
No. of sharecroppers	-		7		3		5		48		4	4
Rented land cultivated by sharecroppers, median	-		12	7	10	3	14	5	20		27.5	4
Number of landlords renting out to sharecroppers	6	6	1	1	2	2	2	2	22			
Working for other farmers	5 (26%)	19	4 (22%)	18	7 (35%)	20	5 (29%)	17	86 (47%)	182	25 (68%)	37
Farmers hiring land workers	10 (53%)	19	7 (39%)	18	11 (55%)	20	6 (35%)	17	67 (40%)	168	1 (2.7%)	37
Agricultural wage, men												
Pay harvest season, median	100	11	100	10	100	5	100	7	70	94	67.5	14
Meals harvest season, median	1	9	1	7	1	5	1	3	1	60	0.75	10
Pay planting season, median	100	9	100	9	100	6	100	5	75	84	70	14
Planting season meals, median	1	9	1	7	1	6	1.25	2	1	56	1	9
Agricultural wage, women												
Pay harvest season, median	100	8	100	4	100	5	100	1	70	48	62.5	6
Meals harvest season, median	1	6	1.25	4	1	3	1.5	1	1	31	0.5	5
Pay planting season, median	100	8	100	6	100	5	81.25	4	70	79	65	13
Planting season meals, median	1	7	1	5	1	4	1	3	1	51	0.75	10

5 kattha = 135 x 135 square feet = 0.17 ha.
100.00 rupees equals approximately £0.73 (October 2006)

5. Discussion of Findings

5.1 Introduction

At the end of the theoretical chapter, three questions were formulated: what factors explain the existence of *kamaiya* contracts; what factors cause changes in the number of *kamaiya* contracts; and has the welfare of the *kamaiyas* increased in response to the ban? In the theoretical chapter, I suggested two theoretical explanations of bonded labor institutions. One emphasizes that bonded labor is a voluntary agreement and the other that bonded labor is an involuntary agreement where the *kamaiya* is forced to accept bad contract terms. Implications of the voluntary and involuntary perspectives on *kamaiya* contracts were mentioned. I will discuss the three questions and analyze whether the data from the fieldwork support the implications of either the voluntary or the involuntary perspective on *kamaiya* contracts. Section 5.2 discusses what factors explain the existence of *kamaiya* contracts, section 5.3 looks at what factors cause change in the proportion of *kamaiya* contracts, and section 5.4 discusses whether the welfare of *kamaiyas* has improved in response to the ban. Section 5.5 discusses whether there has been an increase in social surplus due to the reform.

5.2 What Factors Explain the Existence of *Kamaiya* Contracts?

5.2.1 Empirical Support for the Involuntary View of Bonded Labor

According to the unfree perspective, the *kamaiyas* may have ended up in this kind of labor contract through debt traps designed by the employer. Support for the existence of debt traps in our findings is limited. In the random samples, 33% of the former *kamaiyas* did not have a loan from the last landlord they served. Thus, for these *kamaiyas* there were no loans that bonded them to their landlords. Among the former *kamaiyas* who had loans from their landlords, the median debt size was 5,000 rupees, which is approximately equal to the fixed monetary payment that the *kamaiya* received for one year's work. The real value of the *kamaiya* contract is more than twice as high. The question is whether a loan of 5,000 rupees is such a high debt that it is impossible for the *kamaiya* to repay it. We talked to former *kamaiyas* who had managed to repay the debt and started to work under different labor contracts. This suggests that it was possible, even though maybe difficult, for them to save enough money to be able to pay their debts and leave the landlord. We asked present

kamaiyas why they were *kamaiyas* even today. They gave many reasons, but none of them mentioned their debt to the present landlord as a reason why they chose to be *kamaiyas* today.[27] After the ban on *kamaiya* contracts was introduced, the *kamaiyas* did not have to repay their debt to their landlord. However, many chose to do this, which may imply that to repay the debt was not impossible. Even though it is hard to deny that some of the *kamaiyas* had debt that could never realistically be paid back, for a large fraction their loans to the landlord were most likely not an important reason why they chose to stay in the *kamaiya* relationship. I do not find any significant negative correlation between the size of the debt and the wage received by the *kamaiya*. This implies that debt most likely was not used to force the *kamaiyas* to accept a lower wage.

Another aspect of the unfree perspective on bonded labor is that the worker's decision to become a *kamaiya* is guided by the rule-based decision principle described by March. The workers do not choose according to classical utility maximization, but choose to become *kamaiyas* because they see this as an appropriate option that matches their identity. Is this perspective supported by our data? If the unfree perspective is correct, we would expect that the worker's reasons for becoming *kamaiya* were, for example, that he saw this as a natural and self-evident choice or that he had not considered or was not aware of other opportunities. We asked the *kamaiyas* why they became *kamaiyas* in the first place (section 4.3.5). Some of the answers can be seen as supporting the rule-based decision making model. For instance, those *kamaiyas* who had been *kamaiyas* since they were kids had probably developed a strong identity of being *kamaiya,* which in turn strongly influenced their choices. We also met *kamaiyas* who expressed a sense of hopelessness that no other options were available to them and that being *kamaiyas* appeared to them to be the only possible option. One former *kamaiya* said that after the ban they had to be taught about other employment opportunities, for example where to find casual work. They had not been aware of this possibility before. This observation corresponds to a concept developed by Schaffner (1995:243), who suggests that the landlord deliberately tries to limit the horizon of the workers in order to pressure them to offer their cheap labor voluntarily (see section 2.3.6).

Rankin (1999:32-3) observed two types of *kamaiya*. For one of them, Rana Tharus, the social distance between the *kamaiya* worker and the *kamaiya* landlord is small. The *kamaiyas* did

[27] Of course, the debt may have become a much smaller problem for the *kamaiyas* after the ban.

not stay *kamaiya* forever, but moved in and out of this labor category. Being *kamaiya* was not a fixed status. We also observed that some *kamaiyas* paid their debt and left their landlord and found other employment alternatives, which seems to resemble the Rana type of *kamaiya* described by Rankin.

One could argue that *kamaiyas* have an ethnic identity since almost all *kamaiyas* belong to the Tharu ethnic group. This identity may create peer pressure among Tharus to become *kamaiyas*. However, this argument is problematic as there are many Tharus who are not *kamaiyas*. Also, there are even examples of *kamaiya* landlords that are Tharus.

Many of the reasons the *kamaiyas* gave for their choice of labor contract indicate that they made their choice based on a more rational decision making process. The choice of becoming *kamaiya* was their best choice in the particular circumstances they faced. For example, they chose to become *kamaiyas* because it provided a stable income, which was crucial to smooth consumption. The *kamaiya* contract provided access to credit and they did not possess any land and thus saw the *kamaiya* contract as the best solution. These reasons indicate that the worker made a rational calculation before he chose to become a *kamaiya*.

5.2.2 Empirical Support for the Voluntary View of Bonded Labor

According to the voluntary view on bonded labor, *kamaiya* contracts exist because both parties gain from the agreement. One potential gain is "trading" in risk where a risk neutral landlord offers insurance implicitly to the *kamaiya* through the payment scheme. Qualitative statements from former *kamaiyas* indicate that there was "trade" in risk going on. Many respondents told us that the market for casual labor appeared to them very risky and they were not sure whether they would be able to get enough food to survive if they chose casual labor as the income base for the household. In the *kamaiya* system, they were given a fixed income and were guaranteed enough to eat and a place to stay. Former *kamaiyas* who now work as casual laborers typically emphasized how their income was much less stable now, and that they sometimes struggled to get enough food. The answers seem to indicate that *kamaiya* contracts were chosen to avoid a risky income and a risky labor market.

If risk preference is an important factor for choosing a *kamaiya* contract then a person's attitude towards risk should influence whether a *kamaiya* contract is chosen or not. Data on

risk preferences are not available. However, landholding can be seen as a proxy for a person's preferences towards risk. A large landholding will make a person less vulnerable to economic shocks and therefore have more risk neutral preferences. On the other hand, a person with a small land plot or no land at all would be more risk averse and more likely to choose a contractual arrangement that would reduce the variation of his income. Thus, the implication is that households with small landholdings are more likely to choose *kamaiya* contracts and vice versa. I check this hypothesis by dividing all households in the random samples into quartiles. The first quartile is the households with the smallest landholdings. I also divide the households between those that are *kamaiyas* now or have been in the past and those that do not belong to those categories. Table 5.1 shows clearly that households in the bottom quartile of landholdings are more likely to be or have been *kamaiyas*.

Table 5.1. Cross-tabulations, land distribution and *kamaiya* or not

		Not present/ex *kamaiya*	present/ex *kamaiya*	Total
Land distribution	1 quartile	34 (21.5)	15 (57.7)	49
	2 quartile	25 (15.8)	4 (15.4)	29
	3 quartile	57 (36.1)	7 (26.9)	64
	4 quartile	42 (26.6)	0 (0)	42
Total		**158 (100)**	**26 (100)**	**184**

Column percentage in brackets.

However, the pattern observed in Table 5.1 might have alternative explanations than differences in risk preferences among the respondents. Farmers with little or no land are more likely to offer their labor in the labor market since they do not obtain enough revenue from working on their own land. Therefore, respondents with low holdings of land are also more likely to become *kamaiyas*. The respondents' risk preferences might be affected by other factors than their landholdings, for example income from non-agricultural jobs and ownership of small shops. Revenues from such activities might change the respondent's risk preferences, but this is not captured in Table 5.1.

Bardhan's model of labor tying predicts that risk averse workers with limited access to alternative employment opportunities will have an incentive to enter into a tied labor arrangement with a risk neutral landlord if there is sufficient seasonal variation in demand for labor. Some predictions can be made from this model. First, remote areas where households

have less access to alternative employment opportunities will have more *kamaiya* contracts than areas closer to other employment opportunities. Distance to cities or other markets may be positively correlated with the magnitude of *kamaiya* contracts. Since there is more casual work available in cities, the demand for tied labor contracts will be less in areas close to markets or cities. Second, according to principal-agent theory the fixed wage contract does not give the tenant an incentive to provide effort. It is likely that the tenant under a fixed wage contract, here the *kamaiya*, will be considered lazy.

We found that there was a variation in the wage level between the planting and harvest seasons. Higher wage differences between the two seasons indicate a substantial difference in demand for labor in the two seasons and therefore there should be more to gain from a tied labor arrangement for both parties. For example, if there is no seasonal variation in wage, the worker would have less need of a tied labor contract to smooth income. Thus, we should expect more *kamaiya* contracts in areas where there are higher seasonal differences in the wage levels. Empirical support for this hypothesis is mixed (see diagram 5.1). In the samples from Janakinagar and Durgauli the wage level is equal in both seasons but still there is a high proportion of former *kamaiyas* in the sample. The wards in Suda and Kalika seem to match the prediction from the hypothesis better. A potential error here is that the seasonal variation in wage may have been very different before the ban in 2000. Ideally, we should have data on seasonal wage differences when the *kamaiya* actually worked as *kamaiyas*.

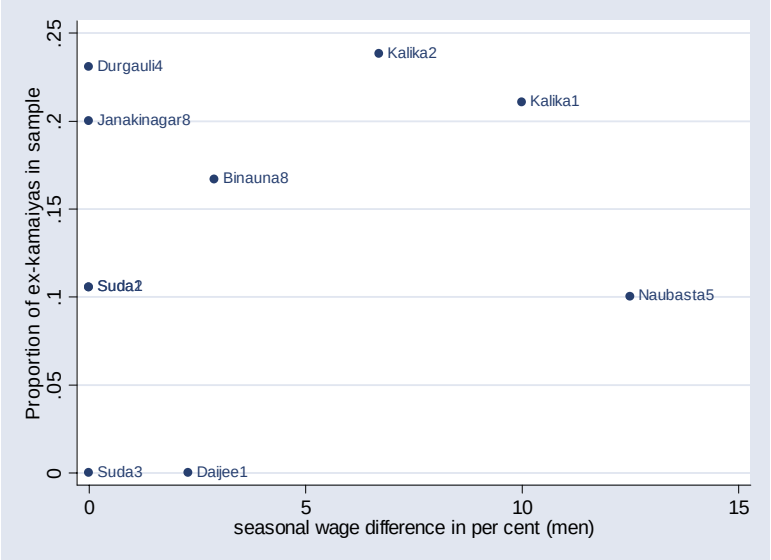


Diagram 5.1. Scatter plot with proportion of ex-*kamaiyas* in sample and seasonal wage difference in percent

Those who live in areas where there are better outside options available for agricultural laborers should have less need for consumption smoothing and thus be less likely to choose a *kamaiya* contract. A laborer will normally have access to more job opportunities and a higher income that is not affected by seasonal variation if he lives near a city. Thus, people living in remoter areas would be more likely to be *kamaiyas* as their outside options are fewer. The data set has some variables that capture, to some extent, whether the household is situated near towns or cities with more work opportunities. For example, whether a household has access to electricity indicates how remote the household is. We also collected data on distance in time to the main market and local markets. Areas with high wages are also likely to have fewer *kamaiyas* as the high wage level indicates that there is more demand for labor and that due to the higher wage level the insurance offered in the *kamaiya* contract is relatively less important.

These predictions may be examined more closely by cross-tabulation. Table 5.2 shows that households that have access to electricity are less likely to choose *kamaiya* contracts. In Table 5.3 the households are divided into three groups according to the time they spend getting to their local market. The 33.3% percentile comprises those who live closest to the local market. The tendency is that those living close to the market are less likely to choose *kamaiya* contracts. The pattern is confirmed even if the distance to market variable is divided into 2 or 4 categories. Similar cross-tabulations between distances to main market do not seem to reveal any systematic pattern on this issue. The weakness with these cross-tabulations is that they do not consider whether the *kamaiyas* have moved after they decided not to work as *kamaiyas*.

Table 5.2. Crosstabulations, access to electricity and *kamaiya* or not

		Not *kamaiya*	present/ex *kamaiya*	Total
Electricity	No	64 (43)	17 (73.9)	81
	Yes	85 (57)	6 (26.1)	91
Total		**149 (100)**	**23 (100)**	**172**

Column percentage in brackets.

Table 5.3. Cross-tabulations, distance to local market and *kamaiya* or not

		Not *kamaiya*	present/ex *kamaiya*	Total
Distance to local market	33.3% percentile	34 (41.5)	4 (26.7)	49
	66.7% percentile	38 (46.3)	11 (73.3)	29
	100% percentile	10 (12.2)	0 (0)	10
Total		**82 (100)**	**15 (100)**	**97**

Column percentage in brackets.

Diagram 5.2 shows a scatter plot between the proportion of former and present *kamaiyas* in the ward and an estimate of the general wage level for casual agricultural laborers in that ward. A meal is sometimes a part of the wage. I have valued a meal at 10 rupees. The scatter plot suggests that the higher the wage level is in the ward, the lower is the proportion of *kamaiyas* in the ward, although Durgauli is an outlier. This is suggestive evidence for the hypothesis that wards with better outside options (better paid casual work) had fewer *kamaiyas*.

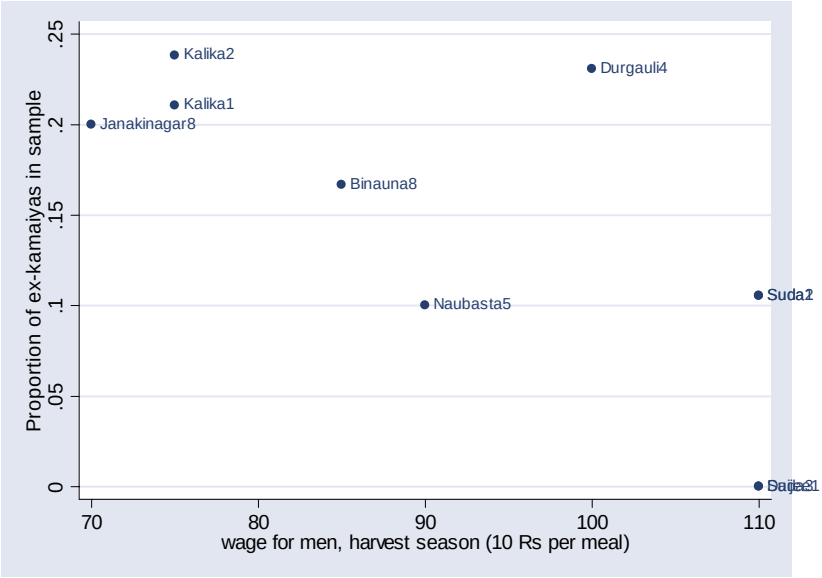


Diagram 5.2. Scatter plot with proportion of ex-*kamaiyas* in sample and wage level

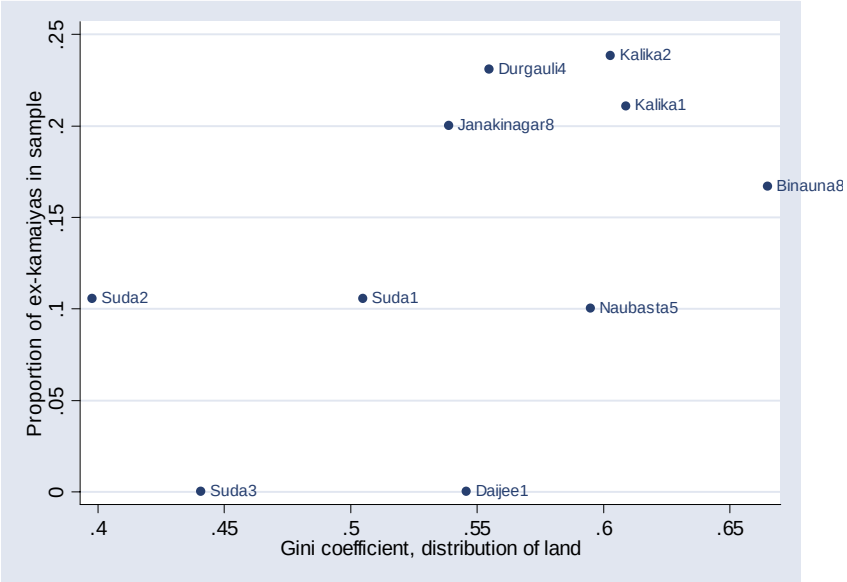


Diagram 5.3. Scatter plot with proportion of ex-*kamaiyas* in sample and gini coefficient of distribution of land

In the theoretical chapter it was suggested that landlords behaving like a monopsonist might be an explanation for the proportion of *kamaiya* contracts in an area. We should then expect that areas with unequal distribution of land have a higher proportion of *kamaiya* contracts. The scatter plot in Diagram 5.3 provides some limited support for this explanation. The tendency is that more unequal land distribution in the ward leads to a higher fraction of *kamaiya* workers.

The analysis above has a number of methodological weaknesses. First, the relationships between the variables can only be seen as suggestive. The cross-tabulations and scatter plots only look at the relationship between two variables. There might be another variable correlated with both of those two variables which is the real predictor of the proportion of *kamaiya* contracts. What I have not done in this thesis is to perform a multivariate analysis where we control for other variables to identify the robust factors that predict the proportion of *kamaiya* contracts in an area. The strongest conclusion I may draw from the findings above is that there appears to be a correlation between the factors mentioned and the proportion of *kamaiyas* in the wards. Based on theory, it is likely that the relationships are causal.

Second, there are not many observations. Third, the proportion of *kamaiyas* in the ward is a figure that is five years old. This proportion is compared to present data on wages, land distribution and so on. These last data may have changed substantially as a consequence of

the ban on *kamaiya* contracts in 2000 and the plots and cross-tabulations may be misleading. Fourth, many of the *kamaiyas* moved to other areas following the ban in 2000. Thus, the proportion of *kamaiya* figures in the plots and tabulations above will not be matched with data on wage and land distribution etc. from the same geographical area. On the other hand, the *kamaiyas* have probably not moved too far from the areas where they used to serve their landlords.

According to the screening theory, the workers who enter tied labor arrangements should be those with lowest entrepreneurial skills. This cannot really be tested, since information on entrepreneurial skills is not available in the data we gathered.

A final argument that supports the voluntary view of the *kamaiya* contract is the frequent change of landlord. Many *kamaiyas* changed landlord every year and used this as an opportunity to demand better terms from the new landlord. This behavior suggests that the *kamaiyas* made rational and voluntary decisions and continually sought better options.

In sum, the involuntary perspective on *kamaiya* contracts has some, but limited, support in our data. Debt traps do not seems to have been a major challenge for most of the *kamaiyas*. Although some of the *kamaiyas*' verbal statements suggest that they were isolated from the rest of the society and not aware of other employment opportunities, I find it more convincing that most workers chose to become a *kamaiya* because it was their best available option. We find some suggestive quantitative support for that. In particular, the strong negative relationship between general wage level in an area and the proportion of *kamaiyas* in wards is striking.

5.3 Why Did the Ban Work?

The number of *kamaiya* contracts has clearly been reduced since the ban. In the random samples we found only 3 present *kamaiyas*.[28] A question of interest is what may explain the reduction of *kamaiya* contracts. According to the unfree perspective on bonded labor, the number of *kamaiya* contracts may be reduced if, for example, the *kamaiyas* start to question whether being a *kamaiya* is an appropriate labor contract for them. If the choice of being *kamaiya* is linked to identities the *kamaiyas* have, a change in these identities will also change

[28] See Appendix to chapter 5 for a formal statistical test that shows a significant reduction in *kamaiyas*.

the number of *kamaiya* contracts. The data we collected is not suitable for analyzing these questions, so we will not pay much attention to the unfree perspective in this section. However, it is interesting to observe that many of the NGOs working to improve the living conditions of *kamaiyas* viewed education of *kamaiyas* and raising awareness as an important element for bringing about change. Thus, many strategies for helping the *kamaiyas* seem to have been inspired by the unfree perspective on bonded labor.

The voluntary perspective on bonded labor will be used to analyze what brought about a change in the number of *kamaiya* contracts. An important aspect that has been put forward in the theoretical literature on agrarian labor institutions is that they need to be self-enforcing. Economic transactions that take place in remote areas, including the agricultural sector, can only to a limited extent be governed by the formal legal institutions that are more effective in urban areas. Thus, if a ban on a specific contractual agreement is put forward, one would expect that rational economic agents would hardly change their behavior in response to a ban because violating the ban has limited consequences. A regulation has to be credible, implying that, for example, the landlord's disincentive for offering *kamaiya* contracts is sufficiently large that he changes his behavior.[29] So, one way to explain change in the number of *kamaiya* contracts is to investigate whether a legal intervention is credibly enforced in these areas.

The other option is to explain a reduction in *kamaiya* contracts as a gradual change. In this case, a third party does not influence the change. It is the landlord or the worker who finds it rational to switch to other labor arrangements. For example, the workers might find better employment opportunities elsewhere and reject a *kamaiya* contract, or the bargaining power of the *kamaiyas* might change. I will first discuss the credible enforcement perspective on change and then the gradual change perspective.

5.3.1 Credible Enforcement

To illustrate how the enforcement of the ban on *kamaiya* contracts became credible it is instructive to apply game theory. Let us consider a game with two players, the landlord and the *kamaiya*, who act sequentially. In an agricultural setting with an excess of agricultural labor, it is reasonable to assume that the landlord is given the possibility of making the first move. He is in a position where he can offer take-it-or-leave contracts to the tenant. The

[29] A change may also take place if the worker gets credible outside options. The worker may then credibly reject the landlord's offer of a *kamaiya* contract.

landlord first offers the *kamaiya* a labor contract with a very low wage that maximizes his profit. Alternatively, he may offer the *kamaiya* another deal, which I call "other contract" and which will be less profitable to the landlord because his labor costs increase due to the higher wage offered to the worker. Following the offer from the landlord, the *kamaiya* refuses or accepts. The landlord knows the situation of the *kamaiya* well and offers terms that are slightly better than the *kamaiya*'s outside option, which could, for example, be casual work. The payoffs are listed in brackets; the first payoff is for the landlord. The payoffs are in this context a preferred ordering of options (ordinal scale). For simplicity, we only assume two options, *kamaiya* contract (payoff is 2 for the landlord) and other contract (payoff is 1), where the landlord prefers the first. The laborer's preferences are opposite; he prefers the other contract (payoff is 2 for the laborer) to the *kamaiya* contract (payoff is 1). If the *kamaiya* refuses, no contract is made and both receive zero payoff. The solution to this game is that the landlord offers a *kamaiya* contract and the *kamaiya* accepts. This is the equilibrium prior to the ban.

Figure 5.1 Model 1. Interventions for kamaiyas
A game-theoretical perspective, kamaiya and landlord

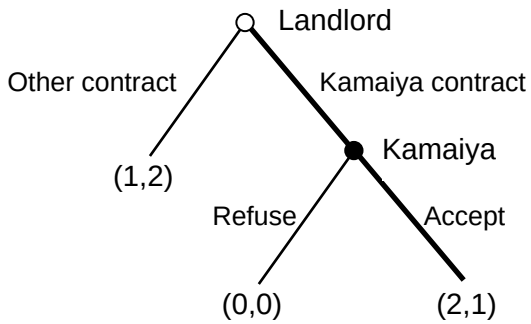
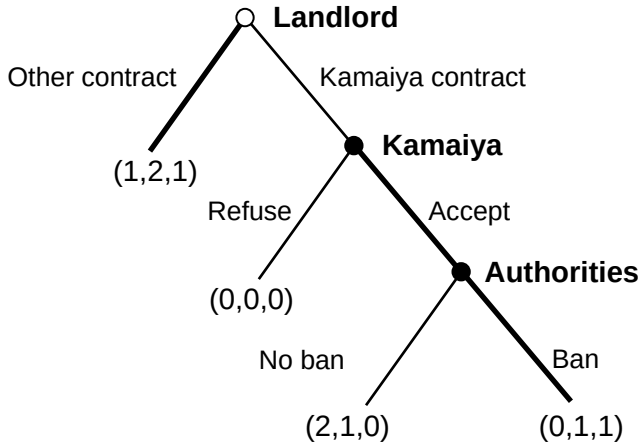


Figure 5.2 Model 2. Legal Interventions for kamaiyas
Landlord, kamaiya and authorities



To analyze the ban on *kamaiya* contracts in 2000, we must include a third player; the authorities (Fig. 5.2). The payoff of this player is listed as number three in the brackets. Observing the *kamaiya* institution, the authorities may either remain inactive or intervene legally by handing the landlord a fine for offering *kamaiya* contracts. During the 1990s, pressure was put on the authorities to abolish the *kamaiya* labor institution and in 2000 they did so. In the game theoretical framework, this means that the payoff for the authorities to intervene was higher than when they did not intervene (the payoff for the authorities is 1 as opposed to 0 when there is no ban). The payoff for the *kamaiya* is not affected by the ban and he is indifferent between a ban or no ban (payoff in both cases is 1). What changes this game is when the landlord's payoff is reduced to 0 when the ban is introduced. If the ban is credible, the landlord will choose "other contract". His profit when he offers this other contract is reduced, but at least he is better off than under the ban. The question is what will make the landlord believe that the ban will reduce his payoff to 0. By banning the *kamaiya* labor institution, it becomes a crime to offer it. A rational landlord has to consider the cost of the punishment and the probability of being caught (Becker 1968:177). If the expected cost is high enough, the landlord will offer the other contract instead of the *kamaiya* contract. The authorities said they would penalize the landlords who did not respect the ban. However, it is unlikely that this was the reason why the landlords stopped offering *kamaiya* contracts. We did not hear of anyone who had been prosecuted for having *kamaiyas* after the ban. A more likely explanation is that there were rumors that the authorities would redistribute land from the *kamaiya* landlords and give it to the *kamaiyas* (Hatlebakk 2006:20). This threat, whether

real or not, was probably sufficiently credible to make the *kamaiya* landlords change their behavior quickly. The payoff for the landlord for choosing the other contract is higher (1) than when the authorities ban the *kamaiya* contract (0). Model 2 (Fig.5.2) shows the new equilibrium when the landlords switch to another contract in response to a credible legal intervention by the authorities.

5.3.2 Gradual Change in the Number of *Kamaiya* Contracts

Section 5.2 explained how factors such as differences in risk preferences between the landlord and the *kamaiya* and access to alternative income sources may explain the existence of *kamaiya* contracts in a region. A change in these explanatory factors may also change the number of *kamaiya* contracts. In contrast to the sudden change of a sudden regulation, this change will be gradual. The *kamaiya* and the landlord may have realized during the 1990s, or before, that other contractual agreements and labor contracts were more beneficial for both of them. If many landlords find other labor contracts more profitable than the *kamaiya* contract the *demand* for *kamaiyas* will decrease. Similarly, if tenants find better job opportunities elsewhere, the *supply* of *kamaiyas* will decrease.

The kamaiyas' reasons for choosing other contracts

There are indications in our data that support the idea that the supply of *kamaiyas* has been reduced gradually. We talked to many former *kamaiyas* who during the 1990s realized that they did not want to work as *kamaiyas* any longer. This suggests that they had realized that they had better options and were not any longer compelled to accept a *kamaiya* contract. Holm & Løkke Rasmussen (1999:81-82) suggest that *kamaiyas* started to question whether their labor services were reasonably balanced by what they received from the landlord. Many of the *kamaiyas* thought that they had to give up too much of their time for labor and would prefer to base their income on other sources. The *kamaiyas* in general found that the landlord lived up to the expectations of a fair landlord, but the system as such was to some extent perceived as exploitative.

In the random samples, 44% of the former *kamaiyas* we encountered left their *kamaiya* landlord and changed to another labor arrangement prior to the liberation in 2000 (see Table 4.7). This figure is confusing as it does not take into account the influx of workers into the *kamaiya* system. However, based on our data it seems reasonable to conclude that the number of *kamaiya* contracts had already started to decrease before the ban in 2000. A gradual

reduction in a tied labor arrangement is similar to what has been observed in India (Lanjouw & Stern 1998:435).

There was a tendency for *kamaiyas* to change landlord more often during the 1990s. A *kamaiya* who wants to change landlord does so most likely because he is not satisfied with the conditions offered. If the *kamaiya* changes very often, it may indicate that he is increasingly dissatisfied with the labor contract and is constantly seeking better conditions with a new landlord. On the contrary, a *kamaiya* who stay years and years with the same landlord does so because he considers the working conditions as legitimate or has no better option.

The landlords' reasons for choosing other contracts

During the 1990s landlords may have started to realize that other labor arrangements could be just as profitable as the *kamaiya* labor contract. A *kamaiya* contract is the most preferred contract from the landlord's point of view due to the low wage costs. However, this labor contract is problematic as the *kamaiya* has little incentive for work effort. Thus, the landlord has to spend resources on supervision of the *kamaiya's* work effort. Respondents in our samples sometimes told us that *kamaiyas* were often accused of being lazy, which may have provoked the landlord to behave in a violent manner to get them to work harder. This makes sense from a theoretical point of view since receiving a fixed wage does not provide incentives for work effort. By shifting to sharecropping, in theory these problems ought to be less severe because the worker has more incentive to contribute work effort. A sharecropper will receive more payment if he works harder and will therefore have incentives for work effort, enabling a decrease in the cost of monitoring. The landlord's choice of a fixed wage contract or sharecropping represents a trade-off between profit and supervision cost.

Our data cannot show precisely whether the *kamaiyas* got better outside options or whether monitoring costs increased during the 1990s. However, the fact that the transition went so fast and smoothly indicates that the two alternatives were not that far from each other in value, from the landlords' point of view.

5.3.3 Historical Examples of Disintegration of Permanent Labor Institutions

The Hali system in South Gujarat, India, in the 1960s has many similarities to the *kamaiya* system. This system gradually disintegrated in one or two decades, before and after the Second World War. Less willingness to employ attached labor may be explained by several

factors, as discussed by Breman (1974). First, Breman suggests that a change to a crop system that was less labor-intensive decreased the incentive for the landlords to have attached labor. It was more profitable to hire labor when needed (Breman 1974: 75). Second, with increasing employment opportunities outside the village, servitude was becoming a less popular option for the workers. The attachment to one landlord was a way to secure a minimum income. However, with increasing wages from other places, this need was no longer important (Breman 1974:75-6). Seasonal migration also contributed to better income security and less need for the income security offered by the landlord.

> The Dublas (bonded labor) began to feel that complete dependence on the master, which they formerly accepted as security, was a heavy burden (Breman 1974:76).

Furthermore, Breman describes a depersonalization of the relationship between the landlord and the tenant. To a larger extent they saw themselves as parties with conflicting interests. The benefits were no longer paid as an "obligation" of the landlord, but increasingly as a monetary wage in a capitalist system (Breman 1976:220). The system of servitude was substituted with a system of casual labor. The former patrons now minimized the previous obligations they had as patrons, and Breman concludes: "The risk of subsistence has been shifted on to the agricultural laborers" (Breman 1976: 226).

Platteau (1994) refers to an example of how a bonded labor system in Japan was dissolved. Increased employment alternatives outside the village put the *nago* (bonded laborer) in a better bargaining position. The landlord had to offer him a tenancy contract, which led to economic progress for the *nago*. Sharecropping became the dominant institution before it was gradually surpassed by fixed rent tenancy, when yearning and wages were sufficiently high to enable the peasant to cope with a higher degree of risk (Platteau 1994:9). In sum, the old patron-client relationship with no clearly defined exchanges of goods and labor time shifted to a well specified contractual arrangement with clear agreements on working hours and other terms. Eventually, the resources they exchanged became limited to specified quantities:

> … the old hierarchical and personalized oyakata-nago relationship died out and gave way to an entirely different relationship, much more egalitarian, and largely impersonal and calculative, wherein the tenant would no longer give the landowner so much as a day's labor without specific compensation (Platteau 1994:10).

5.4 Has the Welfare of *Kamaiyas* Increased since the Ban?

5.4.1. Welfare Effects of Interventions

This section considers whether the welfare of *kamaiyas* has improved since the *kamaiya* contracts were banned. The hypothesis in the theoretical chapter was that their welfare would decrease if *kamaiya* contracts were forbidden. If we assume that the *kamaiya* labor institution was the *kamaiya's* optimal choice among the set of all possible strategies, excluding the *kamaiya* option from the choice set should yield a lower utility. A rational economic agent will choose a *kamaiya* contract if that is his best alternative. By denying him the possibility of choosing his best option, he must choose his second best option, and hence be worse off.

Genicot (2002:103) points out why this is a hasty conclusion. The set of possibilities is not necessarily exogenously given. New choices may become available when other choices are excluded. For example, after the liberation of *kamaiyas* many landlords offered sharecropping contracts, which were probably better for laborers but not for the landlords, which is why an intervention was needed (see Hatlebakk 2006).

The choice set available to the *kamaiya* might change if all the *kamaiyas* simultaneously refused to work as *kamaiyas*. Stopping one laborer from entering into a bonded labor contract may make him worse off, but a general ban on all bonded labor contracts may lead to a socially desirably outcome with higher welfare for the former bonded laborer and redistribution of wealth to the benefit of the same group (Conning 2005:5). There might thus be general equilibrium effects from a ban on *kamaiya* contracts. For example, sharecropping may also increase the wages of agricultural casual laborers, as described by Hatlebakk (2006).

Basu (1999:19) makes a similar argument when it comes to banning child labor. If one child is taken out of the labor force, the children's household will decrease its income. If all the children are withdrawn from the labor market, there will be less supply of labor and higher wage for the parents, making all households better off.

There are two opposing factors that influence the welfare of the former *kamaiya*. On the one hand, his utility is decreased since his income is now more risky. Since the ban, the laborers have not been able to enter into long-term labor contracts and obtain a fixed income and

consumption smoothing that way. The decrease in utility due to a more uncertain income is supported by qualitative statements by the *kamaiyas*. Many told us that their income was more uncertain now and that they found this challenging. On the other hand, the general wage for casual labor may increase as a consequence of the ban on *kamaiya* contracts and the laborer's welfare may be improved as he is better paid for his labor input.

If the *kamaiya* is to be better off, the utility of the increased income must exceed the utility lost as a consequence of a more volatile income. The answer to this question depends on what the *kamaiya* has been doing since the intervention. The former *kamaiyas* can be divided into two groups, those who are employed in a sharecropping arrangement and those who work as casual laborers, either in the urban or the rural areas. A likely difference between these two groups of workers is that they differ in terms of the quality of their labor input. The *kamaiya* landlords gained knowledge about the quality of their workers' labor efforts through their daily interactions with the *kamaiyas*. After the reform, the landlord would thus be able to screen the workers and hire the most skilled workers and offer them sharecropping contracts. The most skilled workers would also prefer a more risky sharecropping contract to a fixed rent contract, as argued by Hallagan (see section 2.3.5). I will discuss the welfare improvements for each group in turn.

5.4.2. From *Kamaiya* to Casual Laborer

In the random samples, 11% of the former *kamaiyas* do casual work only in the agricultural sector, 15% do casual work only in the non-agricultural sector and 30% do casual work in both sectors (see Table 4.9). Whether the welfare of these casual laborers has improved is difficult to assess. This group of former *kamaiyas* bases their income on revenues from an unpredictable market for casual labor. Their income is much more volatile compared to when they were *kamaiyas*. A *kamaiya* contract was worth approximately 12,000 rupees per year. A typical wage for a casual worker was 70 rupees per day. This means that a *kamaiya* has to find casual work for at least 171 days to get the same annual income as before. In fact, since the *kamaiya* is assumed to be risk averse he must find casual work for more days.

When asked to compare a *kamaiya* contract and casual work, approximately 50% of the former *kamaiyas* considered casual work better, 38% preferred a *kamaiya* contract and the rest were indifferent between the two options. These answers indicate that the two options, *kamaiya* contract and working as casual laborers, are considered relatively equivalent in terms

of utility. This matches well with the theoretical prediction from Bardhan's model and principal-agent theory: the landlord will only offer *kamaiya* contracts that are equal to or slightly better than the *kamaiya*'s outside option. Thus, the *kamaiyas* should be more or less indifferent between choosing a *kamaiya* contract or casual labor, which the data seem to confirm.

The utility of the *kamaiya* in this category might be increased if the wage level for casual labor increases due to a general equilibrium effect, as described above. Hatlebakk (2006) builds a model in which the bonded labor's outside option is endogenously determined by the landlord. In other words, the landlord is able to reduce the casual wage level in the village, which is the outside option for a bonded laborer. If the landlord offers sharecropping instead of permanent labor contracts, the casual wage level within the village will increase. The landlord's surplus is maximized when he offers permanent labor contracts, but sharecropping is more efficient. When the ban was introduced, what happened was that the permanent workers were given an exogenous and better outside option that the landlord could not manipulate. The prediction from this model is that the casual wage level should be lower in areas where there were many permanent workers before the ban. Also, we would expect that the casual wage in villages with many permanent workers will be equalized to other comparable villages after ban. Hatlebakk finds empirical support for both predictions.

There is another way to test this idea by using our data. If we assume that the *kamaiya* contract is approximately equivalent to the expected annual wage the *kamaiya* may get in the market for casual labor, the value of the *kamaiya* contract is an indirect way of measuring the casual wage level. One could argue that the *kamaiya* contract mirrors how good the *kamaiyas'* outside options are (casual labor). In 2000, the median fixed annual payment received by *kamaiyas* was 4,973 rupees (16 observations), whereas the payment received by present *kamaiyas* we met in 2005 was 7,228 rupees (6 observations). This is a 45% increase in 5 years. The total inflation during these years was 5%, which suggest an increase in real terms of 40% in the value of the fixed payment under a *kamaiya* contract.[30]

Hatlebakk (2006:23-4) estimates the wage level in *kamaiya* villages at the time of liberation and suggests 54 rupees. This wage is much lower than the daily wage level in villages not

[30] I use the same inflation data as in footnote 19. The price of rice increased by 1% per year on average from 2000 to 2003.

dominated by *kamaiyas*. The median daily wage level in the districts we covered was 80 rupees according to the Nepali Living Standard Survey in 2003/04. After the ban in 2000, the casual wage level in *kamaiya* villages should be similar to the casual wage level in non-*kamaiya* villages.[31] The increase from 2000 to 2003/04 in the daily wage was 37%[32] in the villages dominated by *kamaiyas*. This estimate is close to the percentage estimate of the increase in value of the *kamaiya* contract for approximately the same period. The similarity between the two estimates, the increase in the fixed pay for *kamaiya* contracts and the increase in the casual wage level, suggests that the utility equivalence between a *kamaiya* contract and the daily wage rate remains even after the liberation and that the wage increase for *kamaiyas* has been higher in per cent than the growth of the casual wage level in villages with few *kamaiyas*. In other words, if the utility equivalence between the casual labor and *kamaiya* contracts is correct, the wage level – both the casual wage and the fixed *kamaiya* wage – has increased more in villages previously dominated by *kamaiyas* compared to villages with fewer *kamaiyas*.

Another way to increase the utility of this group is to reduce the variability of their income. The governmental interventions contributed to a more secure income for the former *kamaiya*. The allocation of land and grants to build a house reduces the vulnerability of these households. Vocational training has given former *kamaiyas* easier access to better paid jobs in the cities.

It is reasonable to assume that former *kamaiyas* differ in their vulnerability to economic shocks. When all the former *kamaiyas* face a risky income situation the most vulnerable are likely to face trouble if they are hit by economic shocks. Before, all the *kamaiyas* were given enough to eat and a fixed income. Now at least some of them will probably earn less than a critical subsistence income, which will give them economic problems. The most vulnerable ones might then be worse off compared to the situation when they were *kamaiyas*.

5.4.3. From *Kamaiya* to Sharecropper

Many former *kamaiyas* are now employed as sharecroppers. Our data shows that this was true for 41% of the former *kamaiyas* in the random samples and 12% of the *kamaiyas* in the extra

[31] One of Hatlebakk's hypotheses is that the daily wage level will be equal in *kamaiya* villages and other villages after the liberation.
[32] I have subtracted 3% for inflation. The increase in non-*kamaiya* villages is only 16.4%.

interviews. The land plots being cultivated by former *kamaiyas*, but now under a sharecropping arrangement, were quite large (median size 30 kattha). A sharecropper may do casual work when he is not busy with the land he is cultivating, either working for other farmers or doing casual work in the city nearby. Our data indicates that most sharecroppers take advantage of this opportunity.

A clear majority of former *kamaiyas* considered sharecropping a much better contract than the *kamaiya* contract. However, there are no theoretical reasons why a sharecropper should get higher utility than a *kamaiya* laborer. A profit maximizing landlord will set the wage so that the participation constraint holds with equality, no matter whether it is a sharecropping contract or a fixed wage contract. From the discussion in 5.4.2 we conclude that the casual wage level most likely increased as a consequence of the reform. This is also the outside option for a sharecropper and thus the sharecropper should be better off.

Contrary to the fixed income given to *kamaiyas*, sharecropping implies that the income risk is equally shared by the tenant and the landowner. Thus, a sharecropper has to face a risky income. One explanation for why some workers choose this type of contract is that they are less risk averse than those who prefer casual work. Also, they may be more skilled workers and therefore choose a contract that gives them a higher reward for their high abilities. After the reform, there may have been a self-selection of workers into different types of contract, as described in section 2.3.5. A skilled worker will prefer a contract where the reward is more linked to his performance, for example a sharecropping contract. He is willing to choose this contract as he reasons that given his high skills, it provides the most beneficial contractual terms for him. Less skilled workers would prefer casual work where the wage per day is fixed and the wage is less linked to performance.

The former *kamaiya* landlords probably also had preferences concerning to whom they offered sharecropping contracts. The landlords had gained knowledge about workers' farming abilities due to their previous working relationship. The landlords were capable of choosing the best farmers to work for them as sharecroppers. The fact that this group of workers is probably highly skilled and capable of handling more risk suggests that this group of former *kamaiyas* is not among the most vulnerable. This group of former *kamaiyas* may also take advantage of the opportunity to do casual work whenever they are not busy working as sharecroppers.

In sum, this group of former *kamaiyas* is probably better off following the intervention due to the increase in the wage level for casual work, even though there may be some that are worse off due to the random component of the sharecropping contract.

5.5 Are there Efficiency Gains Due to the Reform?

In an agrarian economy, resources such as labor, capital and land are utilized to produce output. The use and allocation of these resources are decided by the economic players in the economy, that is, the landlords and the laborers. The government may regulate the interaction between these players by making rules that all the players have to follow. These rules give incentives for certain actions and allocations of resources. The ban on *kamaiya* contracts in 2000 introduced a new set of rules for the economic players in the agrarian economy of Western Terai. The reform can be seen as a success if the new rules affected the economic players in such a way that the available economic resources were exploited more efficiently. If the resources are organized in a more efficient manner, more output can be produced with the same amount of resources. The question is whether the reform in 2000 had such positive consequences and this section will explore the issue. I first describe the situation before the ban and then the changes that happened after the ban.

Resource allocation before 2000

L is the total labor supply the *kamaiya* landlords hired for agricultural production. The laborers differ in quality. Some are skilled (L_S), others are only semi-skilled (L_{SS}). This corresponds to Hallagan's idea that workers differ in their entrepreneurial ability (see section 2.3.5).

$$L = L_S + L_{SS} \quad (1)$$

The workers are assumed to have two possible levels of effort, E_0 and E_1, where $E_1 > E_0$. The highest effort level is achieved when the worker is paid more if he works harder. He then contributes with unobserved effort. The wage under a *kamaiya* contract is fixed, which implies that the *kamaiya* has the lowest effort level (E_0). The *kamaiyas* are annually paid wage Q_0 under the *kamaiya* regime, where *kamaiya* contracts are still legal. The profit Q_π is the annual aggregated surplus for the landlord measured in agriculture production.

$$Q_{\pi 0} = QLE_0 - Q_0L \quad (2)$$

Resource allocation after 2000

Under the new regime, *kamaiya* contracts are no longer offered by the landlord. Based on our data, sharecropping contracts to a large extent replaced *kamaiya* contracts. Some former *kamaiya* landlords also hired labor on a casual basis to replace the *kamaiya* workers. I also argue that *kamaiya* landlords selected the most skilled workers to work for them under the new sharecropping contract terms. Based on daily interactions with the *kamaiyas* the landlords should have knowledge about who are the most skilled workers and would prefer to hire them as sharecroppers. The annual average wage for casual workers Q_1 has increased, as argued earlier (see section 5.4.3). Under the new regime, the landlords' aggregated profit is:

$$Q_{\pi 1} = \underbrace{QE_1L_s\, s}_{\text{Production from sharecroppers. Positive or negative contribution to aggregated profit of landlords (compared to before ban)}} + \underbrace{QFE_0L_{ss} - Q_1L_{ss}}_{\text{Production from casual workers less their wage. Negative contribution to landlords' profit compared to before ban since the wage to the workers has increased.}}, \quad (3)$$

S is the share given to the landlord (1-s given to the sharecropper). F is the fraction of former *kamaiyas* who do casual work for a former *kamaiya* landlord. 1-F former *kamaiyas* do not work for *kamaiya* landlords any longer and do non-agricultural work in urban areas. According to our data, this last group could be approximately 15% of all former *kamaiyas* (see Fig. 4.9).

What may we conclude has happened to the landlords' aggregated profit as a consequence of the reform? The sharecropping arrangement should give a higher output per worker (due to higher E). However, the landlord only receives a share s of this production from sharecroppers. It is ambiguous whether this share in terms of output is higher or lower compared to what the landlord received under the *kamaiya* regime. The overall production may increase due to the new sharecropping arrangement (higher E) so that the landlord in fact

earns more even though the sharecroppers simultaneously receive more than they did as *kamaiyas*. However, the landlords' profit probably decreases under the new regime. If not, why did they not choose sharecropping instead of *kamaiya* contracts before the reform if sharecropping was more profitable?

The production from the casual workers (QFE_0L_{ss}) should use the same amount of labor resources as before (same E). But the wage given to the casual workers (Q_1) has increased and the landlords' profit from the casual laborers' production should decrease. Hence, the aggregated profit to the landlords ($Q_{\pi 1}$) could be higher or lower under the post-*kamaiya* regime than under the *kamaiya* regime, but is most likely lower.

The former *kamaiyas* who now work as sharecroppers receive $QE_1L_s(1-s)$ as their remuneration. Based on the subjective evaluation (see Table 4.10), I find it very likely that sharecropping is more profitable than the contractual terms under the *kamaiya* contract, as argued earlier. Additionally, the former *kamaiyas* who work as sharecroppers have received very large land plots to work on.

The former *kamaiyas* who work as casual laborers earn Q_1L_{ss}. They should be better off since the wage they receive is higher (Q_1). However, this is only true if they find enough casual work so that they annually earn at least as much as a *kamaiya*. Many workers in this category supplement agricultural casual work with non-agricultural casual work.

There is a third group of former *kamaiyas* who only do non-agricultural casual work $((1-F)L_{ss.})$. This group may be as large as 15% of former *kamaiyas*. The fact that these workers are no longer engaged in agricultural work could have several explanations. First, according to economic theory a sharecropping contract is more efficient than a fixed wage contract. The worker works more efficiently and fewer workers are needed to work on the land of former *kamaiya* landlords. E increases from E_0 to E_1 under the new regime. Second, only skilled workers are selected to continue to work for the landlord. This fact may contribute to more efficient agricultural production.

The existence of this group of former *kamaiyas* is a strong indication that the resources are being used more efficiently, that is, the same output (or more) is produced with fewer

workers. However, there is a chance that the landlord hires workers who have not previously been involved in the agricultural sector. The fact that many workers have now moved to cities implies that labor resources have been freed from the agricultural sector.

Another observation that supports the idea that the economy has become more efficient is that many *kamaiyas* told us that they worked shorter hours now compared to when they were *kamaiyas*. To many, more leisure time was one of the greatest benefits of the reform. This means that the labor supply has decreased. However, even though the labor supply has decreased we observe that many of the former *kamaiyas* are not any longer needed in agricultural production and work only in the non-agricultural sector. This underscores how the economy has improved in terms of efficiency, most likely due to the new sharecropping contracts.

The analysis above does not take into account how sharecroppers and casual workers now have to face more risk and how this affects their utility negatively. Even though agricultural production increases in terms of efficiency, exposing vulnerable workers to more risk represent a cost to society.

6. Policy Implications

There may be specific reasons why a labor institution in the agricultural sector has a particular form (Stiglitz 1989:24). For example, the existence of long-term labor contracts may be rational as it provides consumption smoothing for workers. A government which wants to regulate and change existing labor relations must consider carefully what the purposes of the existing agricultural institutions are. By prohibiting one type of labor contract the government may cause more harm if the contract solved problems for which the government does not provide any alternative solutions (Bardhan 1989:7).

The ban on *kamaiya* contracts was successful in the sense that it did reduce the number of *kamaiya* contracts. The *kamaiyas* left their landlords in large numbers. However, the *kamaiya* contract insured the tenant against income fluctuation. Immediately after the *kamaiya* contract was banned the government did not have alternative ways of providing the insurance the *kamaiyas* had now lost. One could argue that the *kamaiya* landlord provided welfare services to the *kamaiyas*. Just after the ban on *kamaiya* contracts, there were no indications that the authorities had thought of how to substitute the welfare services previously provided by the landlord. Later on, different programs have allocated land, given grants for house building and provided vocational training for the former *kamaiyas* (see Gurung 2004 for an overview). In sum, these programs have increased the outside option of the *kamaiyas* and should give them better bargaining power in negotiations with employers. The former *kamaiyas* that are now sharecroppers seem to have improved their welfare compared to before. Therefore, policy makers should be primarily concerned about the welfare of those former *kamaiyas* who are now casual laborers. One element here is to improve the infrastructure. Better roads reduce the costs for laborers seeking and finding job opportunities in cities nearby. Other policies would be to continue to redistribute land and to provide alternative credit sources and vocational training for the former *kamaiyas*.

An interesting implication of this legal intervention is that it demonstrates that it is possible to regulate labor relations in an agricultural setting. The ban was credibly enforced and the number of *kamaiyas* fell quickly after 2000. Our analysis suggests that it was not the potential penalty for landlords offering *kamaiya* contracts that brought about the sudden change, but rather the rumors that the authorities would expropriate land from *kamaiya* landlords and

distribute it to the *kamaiyas*. The expectation that the expropriation might take place was enough to make the landlords change their behavior.

Even though institutions may serve a particular function and have rational explanation, they may not be efficient in the sense that other institutions may replace them and generate a higher social surplus (Bardhan 1989:8-9). There seems to be a fair amount of evidence that the *kamaiya* labor institution served a real economic purpose as it provided consumption smoothing and insurance for risk averse laborers. However, this does not imply that other labor institutions might be more efficient institutions. In Nepal, the *kamaiya* contracts were replaced by sharecropping. There are many reasons why this is a more efficient institution than the *kamaiya* system. First, sharecropping provides effort incentives for the tenant. The cost of monitoring and the risk of moral hazard should be reduced. Second, Hatlebakk (2006) argues that the landlord who offers *kamaiya* instead of sharecropping contracts may also pay a lower wage for casual laborers in equilibrium, and thus manipulate the *kamaiya* laborers' outside option downwards. This is profitable for the landlord but not socially optimal.[33] The ban made this maneuver more difficult for the landlord. Third, the previous *kamaiya* landlords have probably selected the *kamaiyas* with highest entrepreneurial input to work as sharecroppers for them. In other words, former *kamaiyas* who became sharecroppers were probably the best farmers. This could potentially have efficiency gains as fewer labor resources are used to cultivate the same amount of land. An empirical observation also supports this argument. Former *kamaiyas* who now work as sharecroppers (from the random sample) have been given a median landholding of 60 kattha (see Table 4.9). The overall median landholding for sharecroppers is only 20 kattha (table in Appendix to chapter 4). The large landholding given to former *kamaiyas* signals that they are considered skilful workers. To make agricultural production even more efficient, theory suggests that sharecropping should be replaced by fixed rent tenancy. This gives the maximum incentives for effort from the tenant and generates higher overall agricultural production.

[33] See Hatlebakk (2006) for a discussion of non-credible side-payments.

7. Conclusion

This thesis has examined a reform to abolish the *kamaiya* labor system in southwestern Nepal. In this system, workers tie their labor to a landlord for one year. In return, they receive a fixed annual income and other benefits such as meals, housing and consumption credit. The system seems to share many of the characteristics of a patron-client relationship. Income smoothing and insurance seem to be the main motives for workers choosing this particular contract. Through the labor contract the *kamaiya* implicitly insure themselves against the risk of unemployment in a risky market for casual labor. This "trading" in risk is possible since the landlord is less risk averse than the worker.

In 2000, the Nepalese government banned *kamaiya* contracts and threatened to penalize landlords who offered these contracts. The ban was successful in the sense that the number of *kamaiya* contracts was reduced significantly. Today, *kamaiya* contracts are rare.

The former *kamaiyas* are now either sharecroppers or casual workers who find work in the agricultural or urban sectors. Both categories of former *kamaiya* face a more volatile income now compared to before. The sharecroppers now share the risk of agricultural production together with the landlord. By assuming more of the risk in agricultural production, they also have more incentive for putting in unobserved effort since their remuneration is likely to increase in response to higher levels of effort. The former *kamaiyas* perceive the sharecropping contracts to be much better than *kamaiya* contracts. In addition to the income from the land, a sharecropper may supplement his income by doing casual labor elsewhere. We found that the former *kamaiyas* were working fewer hours and that their new leisure time was greatly appreciated. Many former *kamaiyas* want to work under this kind of tenancy contract but are not able to due to a limited supply of these kinds of contract. The sharecropping institution is more efficient from a social point of view, as argued in chapter 5 and 6.

The other group of *kamaiyas* has become casual workers and they struggle to find enough casual work to survive. When asked to compare their new situation with being a *kamaiya* their answers are ambiguous. In terms of utility, the former *kamaiyas* seem to be more or less indifferent between these two options. Theories from labor tying predict that tied laborers will be slightly worse off if they can no longer choose their preferred options and have to choose

their second best options. Our data seem to confirm that the change in utility for this group of former *kamaiyas* is small and most of them are indifferent between the two options. Hence, the welfare improvement for this group is ambiguous. However, we argue that the ban has increased the casual wage level in villages with a high presence of *kamaiyas*. The ban has increased the outside options for the former *kamaiyas* and they should be better off. Whether this increase in wages exceeds the reduction in utility due to a more volatile income remains an unanswered question.

Policies that aim to improve the life of former *kamaiyas* should be focused primarily on how the welfare of those who now work as casual laborers. The policies should aim to reduce the volatility of the income of this group. Several attempts have already been made to do this, for example allocation of land and vocational training. Better infrastructure can also provide easier access to work for these laborers. Improving access to credit would also help the former *kamaiyas*.

The good long-term effect of the intervention is that *kamaiyas* have become much more integrated into the labor market. The ex-*kamaiyas* must now engage more actively in the labor market and seek work themselves. To some extent, they were excluded from the labor market when they worked for a landlord. Their freedom of movement was also restricted. One effect of the reform is that many *kamaiyas* have started to realize that there are alternatives to being a *kamaiya*, alternatives that at least some of them were not aware of before the intervention.

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CMI
Chr. Michelsen Institute
Bergen, Norway
Tel: +47 55 57 40 00
Fax: +47 55 57 41 66
cmi@cmi.no
www.cmi.no

SUMMARY
This report investigates the welfare effects for bonded laborers (kamaiyas) in Western Terai of a ban on permanent labor contracts in July 2000. The ban was credibly enforced and within a short time the number of bonded laborers was reduced significantly.

By and large the bonded labor institution in this region must be seen as a voluntary agreement whereby a risk averse worker entered into an annual labor contract with a risk neutral landlord. The contract provided a fixed income which smoothed consumption for the worker, who thereby avoided exposure to an unpredictable labor market for casual workers. The kamaiya worker received other benefits as well, such as housing, food and access to credit. However, the working hours for kamaiyas were very long.

The former kamaiyas may be divided into two groups, those who have become sharecroppers and those who work as casual laborers. The bonded labor contracts have mainly been replaced by sharecropping. Both groups have in common that their annual income has become more volatile since 2000. However, I argue that both groups have become better off. The reason is that the ban on bonded labor has increased the wage level for casual workers in villages with a high presence of kamaiyas, which implies that the outside option of former kamaiyas has increased. I also argue that sharecropping is a more efficient institution than the kamaiya labor system.

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