

CHILLI TRANSACTIONS IN BHUTAN:  
AN ECONOMIC, SOCIAL AND CULTURAL PERSPECTIVE

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*Introduction*

Chillies<sup>1</sup> occupy a very important part of the Bhutanese diet. The Bhutanese people eat chillies in every meal and almost all Bhutanese dishes contain chillies in various forms. Many Bhutanese people confess that they “do not know how to cook without chillies”.<sup>2</sup> Moreover, their appetite decreases dramatically when a meal does not have a sufficiently spicy kick. For the Bhutanese people, therefore, it is vital to secure enough chillies. While almost all people in Bhutan eat chillies, chillies do not grow everywhere in the country, mainly due to climatic reasons. Those who live in the area where chillies cannot grow have to obtain them somehow from somewhere. Even those who grow chillies sometimes need to get chillies from other places, the reasons for which will be elaborated later. This paper is about how people in Bhutan, especially in rural areas, obtain chillies, and also how people

<sup>1</sup> Most chillies consumed in Bhutan seem to be *Capsicum annuum*.

<sup>2</sup> Choden also presents a similar account of the Bhutanese inclination for chillies (Choden 2008: 112). There are numerous examples of writings on chillies, the symptom of ‘chilli addiction’ and love for this plant. For example, *Kuensel* (one of the oldest newspapers in Bhutan) dated 14 July 2008 gives the following account:

It is their incomparable sharp flavour, which some describe as succulent and earthy, with a clarity that seems to reflect the taste and smell of the skies and landscapes of Bhutan. ... Naturally, chillies are ubiquitous in Bhutan. ... ‘Addictions to *ema* (chilli) are formed early in life and the victims, I for one, never recovered,’ said Abi Sonam Kitsho, 85, from Zhemgang. ‘On cold winter days, I get such a passionate yearning for a bowl of *ema datsi* (chilli and cheese) that I nearly lose my mind’.

who have surplus chillies sell or exchange them with other commodities they need.

There are several channels through which chillies are transferred. These are, for example, selling/buying in the market, exchanging with other commodities, working for other people and getting paid in chillies, offering them as a gift, compensating for damage caused by domestic animals by giving chillies, and there is, in some parts of the country, even a custom of making an annual trip to ask for chillies. Of these channels, the paper will focus on two main ones, that via the medium of cash (usually in market places and shops) and that via exchange with other commodities, so-called 'barter'. The paper will give comparisons of these two main modes of transaction from the perspective of farmers, and will argue that people in Bhutan, especially in rural areas, alternate between the two modes of transactions very skilfully to reach a satisfying level of food security with reference to chillies, both in terms of quality and quantity.

Discussion on food security in general so far tends to focus on economic aspects of obtaining food. Those are mainly concerning the production, market access and distribution of food. Socio-cultural aspects of food security have not been very explicit, though they have been indicative, for example, in the studies on gender-related dimensions of production and food distribution within a household.<sup>3</sup> While this paper examines trading of one of the important food items in the Bhutanese diet, it will also compare socio-cultural dimensions of trading between barter and cash medium transactions.

The structure of the paper is as follows. Firstly, it presents the methodology of data collection on which this paper relies. Secondly, it discusses a few conceptual issues by reviewing preceding studies and thereby contextualises the following ethnographic narrative. The section gives an overview of the current trends in food security research and points out that while economic and material aspects are emphasised, less attention has been paid to socio-cultural aspects of food security. Thirdly, it briefly introduces the position of chillies in the Bhutanese diet. Fourthly, it provides a description of how cash trading and barter transactions typically take place among farmers. Finally, it narrates, from the farmers' point of view, positive and negative aspects

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<sup>3</sup> As an example of gender-related dimensions, see Levin *et al.* (1999). De Boeck (1994) is an example of studies on social dimensions of hunger. Fortier (2001) is one of the few examples of analysis of social and political dimensions of barter. The article however views barter as an expression of resistance of a minority group of hunter-gatherers against the hegemonic group of agriculturalists, rather than as a means of securing food.

of each mode of transaction, and also how farmers use these different modes of transaction to meet their needs.

Through these analyses the paper argues that neither economic (materialistic) nor socio-cultural factors on their own can explain elements which facilitate people's access to food. We need an integrated perspective which includes both economic and socio-cultural aspects of how people ensure their food security.

### *Methodology*

The data on which this paper relies is mainly ethnographic, being collected through interviewing people in rural areas of Bhutan. The fieldwork was conducted in several phases spreading from 2004 to 2009.<sup>4</sup> During this period, the fieldwork received support from the Ministry of Agriculture, Royal Government of Bhutan. Interviews with farmers were conducted in the following ten *dzongkhags* (districts), covering a wide range of agro-ecological settings both in chilli producing and non-chilli producing areas: Paro (sPa ro), Thimphu (Thim phu), Punakha (sPun na kha), Wangdue Phodrang (dBang 'dus pho brang), Trongsa (Krong gsar), Bumthang (Bum thang), Mongar (Mong sgar), Lhuentse (lHun rtse), Trashigang (bKra shis sgang) and Trashi Yangtse (bKra shis g.yang rtse). The number of people interviewed was about two hundred. The interviews were carried out using semi-structured questionnaires, which included how they trade chillies, through which modes of transaction, and the details of each transaction they engage in. Since Bhutan has nineteen different languages (van Driem 1994: 87), interpreters were employed wherever necessary. In most cases, the interpretations were from a local language to English.

Some of the aspects which needed careful attention during the interviews were units of weight and volume, particularly those with so-called Bhutanese units, such as *drey*<sup>5</sup>(*bre*) and *sang* (*srang*). *Drey*<sup>6</sup> is a

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<sup>5</sup> Spelling of Dzongkha (the national language of Bhutan) terms in this paper follows those which appear in the publications of the Royal Government of Bhutan and *Kuensel*.

unit of volume and, according to the Ministry of Agriculture, it represents 1.21 kilograms of paddy (un-husked rice) or 1.66 kilograms of rice. A measure of *drey*, which is used in rural areas is not precisely uniform, therefore it can vary from one house to another. The actual transactions take place with a mutual understanding of ‘correct’ *drey*. *Sang* is a unit of weight, which is often used for measuring butter and fermented cheese called *zeydey*, and translates to 390 grams (Ministry of Agriculture 2009).<sup>7</sup> Information on volume, weight, price and terms of exchange was obtained from farmers interviewed. This information was cross-checked by asking the same questions of their trading/exchange partners, or other farmers who trade in the same market places. However, the reader should be aware of the limitations of the data in terms of its accuracy in quantities. This is mainly because the precise measurement of a unit used for measuring varies from place to place (in some cases, depending on each transaction), and also because the data largely depends on what farmers told us from their memories.

*Socio-cultural aspects of food security: literature review*

This paper discusses an aspect of food security through focusing on chilli trading in Bhutan. In recent discussions on food security, ‘access’ to food has received increasing attention in recognition that “if food is in fields or in the markets, but families cannot afford to acquire it, then they are food insecure” (Benson 2004: 8).

The focus of this paper conforms to the general trend of food security analysis. So far however, very few analyses on access to food with ethnographic details from Bhutan have been presented.<sup>8</sup> Furthermore, the ethnographic data in this paper will reveal socio-cultural aspects of access to food, and will argue that access is not only a matter of economic factors such as income and transportation, but

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<sup>6</sup> In Bhutan, according to Choden (2008: 64), standardised *drey* (*bre*) has been introduced by the government since the 1960s.

<sup>7</sup> The conversion table was provided by one of the officials of the Ministry of Agriculture, Royal Government of Bhutan, during the fieldwork conducted in November and December 2009.

<sup>8</sup> Ueda (2009) examines, with some ethnographic data from Bhutan, the concept of food security in relation to Gross National Happiness (GNH); Bhutan’s development policy. It argues that food security under the GNH policy is not only a matter of securing enough food, but also a matter of how the food items are produced, circulated and obtained.

also a matter of socio-cultural factors including social networks and conforming to cultural norms.

Social and cultural dimensions of food security, especially concerning access to food, can be related to a group of literature which highlights social capital. In the *World Development Report 2000*, social capital is largely attributed to links among people, ranging from strong bonds connecting family members and neighbours to relatively weak vertical ties between people. These links are, according to the World Bank report, expected to serve as a risk mitigating mechanism. There are also academic works which support the view that social capital and informal networks generally reduce vulnerability and enhance the resilience of people who are marginalised in society (for instance, Boshier *et al.* 2007). The present paper will analyse, using case studies from Bhutan, how these social links work in the case of two modes of transaction, i.e. barter and cash, and also assess how important the social ties among people are in securing food.

Another feature of this paper is its focus on chillies. In the standard definition of food security, chillies may not be considered an important food item. Therefore households and individuals who lack access to chillies would not normally be considered as food insecure. Food security is still largely recognised as a matter of intake of calories, and to a less extent, of protein and micro-nutrients. As Huish (2008: 1392) rightly points out, the focus on hunger and accessibility has led the current discussion to view individuals as “mere containers for calories”. The meaning of particular food items in a specific cultural setting has been given less attention. Chillies represent a very important food item for the Bhutanese people, but in the current discussion on food security they can only be considered in terms of vitamins at best. Chillies are classified as a spice (not as a vegetable as perceived by most Bhutanese people) and even their nutritional value can be neglected. Cultural preferences for food are mentioned in some works, such as Coates *et al.* (2003), but they have not been developed to a re-conceptualisation of ‘food security’. “Cultural preferences” are also mentioned in the definition of food security given in the Rome Declaration on World Food Security and World Food Summit Plan of Action;<sup>9</sup> however, they are not reflected as major indicators of food security. For instance, the

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<sup>9</sup>“ Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.” *World Food Summit Plan of Action, 1996* (FAO 1996) The same definition is used in the *Declaration of the World Summit on Food Security in 2009* (FAO 2009).

World Hunger Map 2010 by the FAO (Food and Agriculture Organisation) relies solely on calorie intake as the indicator of food security.

This paper is an attempt to draw more attention to social and cultural aspects of food security. Food items which some people can survive without can represent a basic food item for survival for others, and access to food cannot be discussed without an insight on social and cultural dimensions.

### *Why chillies?*

As stated at the beginning of this paper, chillies occupy a very important part of the Bhutanese diet. The total production of chillies in Bhutan in 2008, according to the Ministry of Agriculture, was about 7,312 metric tons (Ministry of Agriculture 2010). As the production was 4,500 metric tons in 2004, it seems the trend is increasing (Ministry of Agriculture 2008: 16). According to *Agriculture Statistics 2009* (Ministry of Agriculture 2010), total household income from chilli selling in Bhutan was about Nu.170 million in 2008, (about Nu.280/person).<sup>10</sup> The average ratio of households which sell chillies for cash in Bhutan is about six percent. In areas which have good market access, such as Paro and Punakha, more households sell chillies for cash (twenty-six percent in Paro, and nineteen percent in Punakha). In order to show the important role that chillies occupy in Bhutanese diet, the following aspects are informative.

The chilli is generally recognised as a vegetable rather than a spice. Hence, chillies are something to be ‘eaten’. “Does he (or she) eat chillies?” is a question often asked to find out the extent to which a foreigner accommodates the Bhutanese way of eating. The most common dish among the Bhutanese is perhaps ‘*ema datsi*’, a dish prepared with chillies and cheese. Most Bhutanese people eat chillies from childhood. The author saw a three year old child eating rice with a dip sauce made of chilli powder, salt, Sichuan pepper, tomato and coriander leaves. One person interviewed in Thimphu answered that he buys 1.5 to 2 kilograms of fresh green chillies every week for a family of four adults during the summer, and also consumes dried chillies along with the fresh chillies.

Chillies are said to be cultivated up to an altitude of 2,700 meters (Choden 2008). However there are areas even below 2,700 meters

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<sup>10</sup> Ngultrum (Nu.) is the currency in Bhutan and is pegged to the Indian rupee. As of December 2010, one US dollar is about Nu.45.

where chillies do not grow for various reasons. For those people who live in areas where they do not grow well, obtaining chillies is a very important issue. One feature of the chilli is that it does not have a substitute. Other food items generally have a substitute, for example, rice can be substituted with other grains such as wheat, buckwheat, maize, and millet. In fact in many parts of Bhutan, where people cannot obtain enough rice, they eat these grains. For chillies, however there is hardly a substitution and this fact makes obtaining chillies a more urgent task. An episode from the Tang Valley in Central Bhutan, where chillies do not grow, shows this sense of urgency. The people in Tang used to go to the neighbouring valley, Kurtoe (Lhuentse Dzongkhag), to ask for chillies every autumn until a road connection brought chillies to nearby shops and markets twenty years ago. Eighty-two year old Aum Dawa narrated that she used to go to Kurtoe to work in the paddy fields and received three *drey* of paddy for one day's work. She also went around from house to house in Kurtoe asking for chillies since the area produces chillies in abundance, but she could only get about ten kilograms of dried chillies, which was hardly enough for her family for the following year. When chillies ran out, she beat the remaining seeds of chillies and used them in cooking. This was a story of when she was young enough to be able to travel to Kurtoe, which is three to four day's walk.

Chillies are traded not only for eating but also for seeds. In the areas where the harvesting of chillies falls during the monsoon season, chillies cannot be dried well because of humidity. This means chillies are harvested before seeds become mature. The farmers therefore have to rely on chilli seeds from higher altitude areas where the harvest season is after the monsoon. As a result, obtaining chillies can also be an important matter even for those who grow chillies.

*Chilli trading: cash transactions and barter*

Chillies can be traded in various forms. They can be fresh green, dried red, and dried powdered red. Dried white chillies are harvested as fresh green, immersed in hot water and then dried under the sun. People sometimes cut fresh green chillies into small pieces and dry them. This kind of dried chilli retains a green colour. These various forms of chillies are used in different dishes, and there is a suitable method of cooking for each kind of chilli.<sup>11</sup> Chillies can also be traded as

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<sup>11</sup> Choden (2008) gives an excellent description of different methods of Bhutanese cooking involving chillies.

seedlings. An official from the Ministry of Agriculture pointed out that, unlike many other plants, chilli seedlings can keep in good condition after being uprooted from the soil and transported. This can enhance income generation for farmers, since they can be sold as seeds, seedlings, fresh fruit and in dried form. The following narrative focuses mainly on trading fruit, both fresh and dried, not touching much on trading seedlings.

Trading of chillies for cash is expanding as road networks are extended. At the same time, these days, people are more in need of cash in order to finance children's education and to meet various material needs. One farmer in Ramjar Gewog<sup>12</sup> in Trashy Yangtse Dzongkhag said, "people's first preference is cash these days." Typically markets are held during the weekends in most of the towns where district headquarters are situated. The number of shops is increasing along roads, selling basic household items. Most chilli trading for cash takes place in markets, and to a lesser extent, in local shops. (Transactions from visiting individual houses can also sometimes be done with cash.)

Transactions with cash mostly take place in shops and market places with unknown people. Barter, on the other hand, usually happens with a known person who mediates the transaction. Usually people know which commodity can be exchanged with what and at which time of the year in a particular village. Attention should be drawn to the fact that barter also occurs between chillies and chillies. This is an exchange with a time lag. For example, in the lower part of Punakha and Wangdue Phodrang, the harvesting of chillies falls during the monsoon season. People in the area therefore cannot dry chillies, and thus cannot get mature seeds from their harvest. They take their fresh green chillies to higher altitude areas, where the harvest season is after the monsoon. The early fresh green chillies from the lower altitude are welcomed by those at the higher altitude, where people have to wait for their own harvest. After a few months, when the chillies at the higher altitudes are properly dried, they are brought down to the producers in the lower altitude areas.

When a person wants to barter his chillies with oranges from Village A, for example, he takes them to his host family in the partner community with a small gift. The host announces to the people in the village that chillies from Village B have arrived to be exchanged with oranges. The person who brought chillies may or may not stay while

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<sup>12</sup> *Gewog* is an administrative level which is below *dzongkhags*. Sometimes it is translated as block.



the transaction takes place. The host primarily looks after the transaction, and the person who brought chillies will receive oranges.

The terms of barter transactions, according to the data the author has collected, are usually stable, and are the same throughout the area where barter of various other commodities also take place. Within the period of the fieldwork the author conducted, each of the following areas are considered to be 'one area': Paro, Thimphu, Punakha and Wangdue Phodrang; Bumthang, Trongsa, Lhuentse and the part of Mongar where there is frequent contact with Bumthang; the part of Mongar which is near to Trashigang, north of Trashigang and Trashiyangtse. On the other hand, in cash transactions, the price of fresh green chillies fluctuates more than ten times during the season. The first harvest usually fetches the highest price, and the price goes down as more chillies come onto the market. Prices of dried chillies are, however, usually stable.

*Cash transactions and barter: from the farmers' perspective*

In some media reports barter is represented as a vanishing practice, as the implementation of development programmes accelerates socio-economic changes affecting the practices of trading and exchanges amongst people. As stated above, the number of shops and markets has increased and people have started to feel that it is easier to buy in shops and markets rather than engaging in barter. The author's fieldwork data also confirms that some barter practices have certainly ceased. For example, farmers in one village in Ramjar Gewog in Trashiyangtse Dzongkhag stated that they bartered their maize for yak butter and cheese from Merak and Sakten areas until two years ago. Also a person in Galing in Trashigang Dzongkhag said that barter with Thrimshing and Kangpara areas had ceased twenty-five years ago. In many cases, new shops and road networks were cited by people as a reason why barter had stopped. They said that it is easier to buy in shops.

Cultivation of a new crop also changes the pattern of trading in rural areas. People in the Tang and Ura valleys in Bumthang Dzongkhag used to go to Tangmachhu area in Lhuentse Dzongkhag and Thrithangbi and Limithang areas in Mongar Dzongkhag respectively, to exchange their product with rice and chillies. The barter, however, gradually ceased to take place around twenty years ago, according to several farmers, as potato cultivation started in Bumthang. Potatoes are cultivated as an important cash crop, and are mostly taken by farmers to the border town of Phuentsholing to be sold

at the auction yard for exporting to India. There, they tend to buy their necessary items, including rice and chillies, with the cash obtained by selling potatoes.

In some other cases, however, barter transactions are still active and form an important part of people's food security. In Trashigang Dzongkhag, where interviews were conducted with farmers in May 2007, one farmer informed that in the previous year he obtained about thirty-five kilograms of fresh green chillies and seven kilograms of dried red chillies through barter. For the family of four adults, he said, it was enough as he grows chillies in his own field as well. Another farmer in the same village said that he gets more chillies through barter than buying from shops with cash. In the previous year, he obtained seventy kilograms of fresh green chillies and twelve kilograms of dried chillies through barter. Though he cultivated chillies in his garden, the harvest was not very good due to chilli blight.<sup>13</sup> Two farmers in Ramjar Gewog in Trashy Yangtse Dzongkhag said that they get more than seventy percent of rice they eat through barter. Although the extent to which people engage in barter varies widely, barter remains an important means by which many farmers obtain food.

In the area called Dawakha in Paro Dzongkhag, the authors met several households which have recently started to barter. The village is known to produce good quality chillies, and the degree of monetisation of each household economy is very high with chillies and other vegetables being sold in Thimphu market every weekend. One farmer who recently started to barter with people in Lobesa in Punakha Valley,<sup>14</sup> exchanging her chillies with rice said, "if you sell your chillies in the market and buy rice with that money, you will get less rice compared to when you exchange with rice in Lobesa. So it is better. I take a taxi to go to Lobesa for barter."

From the point of view of farmers who produce rice, transactions at market places and shops have a hidden cost, which is husking. In order to sell in markets and to shops a farmer has to husk rice himself, and for that he or she has to pay for using the husking machine, or invest in more labour to do it manually. In barter, transactions usually take place in the form of paddy or un-husked rice, saving farmers the cost of husking. Moreover, products are delivered to the door-step. These 'hidden' costs are also some of the reasons that farmers opt for barter.

<sup>13</sup> "Chilli blight", according to Wangdi (2005), is "a general wilting disease" caused by organism named *Phytophthora capsici*. The disease seems to be affecting chilli production in Bhutan since mid-1990s.

<sup>14</sup> Lobesa is in the Thimphu Dzongkhag but is situated in Punakha Valley.

Furthermore, some essential items are obtained only (or mostly) through barter. One of these items is red rice, which is indispensable for important occasions such as religious ceremonies and festivals. It is easily obtainable in bigger markets such as the one in Thimphu, while in rural areas the kind of rice one can buy in shops is predominantly the white rice imported from India. Therefore people in rural areas usually rely on barter to obtain red rice. Farmers in Dawakha said that they make sure to get red rice in exchange for their dried chillies. Bhutanese chilli is also one of the items which cannot be found very easily in shops in rural areas as dried chillies sold in rural shops are usually imported from India. Many Bhutanese people prefer the local variety of chilli to Indian imported ones. People generally say, "Indian chillies are too hot, and the local variety of chilli is tastier." Milk churning utensils, fermented yak cheese and yak butter are also among those items which are more easily obtainable through barter than in markets and shops. The fact that some food items can be accessed almost exclusively through barter in some parts of the country is a very important point in considering 'access to food'. However, the implications of different modes of transaction for household survival strategies have not been central to the analysis regarding access to food.

The 'human touch' of barter also helps to secure the amount of items farmers need. Some farmers in Trashigang said that when someone comes for barter, they need to offer at least a small amount of the item wanted, because they "feel pity" sending the person home without anything. At the same time, the farmers generally seem to perceive that when they take their products to markets, they are never sure how much will be sold by the end of the day. One farmer said: "In weekend markets I have to sit down and wait for customers all day, then attend each transaction by weighing products and counting money. Even after all these tedious tasks, I won't know how much I can sell by the end of the day." But if they take them for barter, they are almost sure that all of their products will find takers. One farmer told the author that because he knows the person in the partner community there is very little chance that his products will be rejected. This means that the farmer knows that he will receive the desired quantity of whatever it is he needs. Farmers, however, also said that in barter transactions, they cannot complain about the quality of the products offered by the people of their partner community. This is also because of the 'human touch'. Once the human relations already exist, and the transaction takes place around these human ties, it becomes difficult to complain about the quality.

It seems that farmers are consciously playing with the two modes of transaction. One farmer in Ramjar Gewog in Trashi Yangtse Dzongkhag said that he takes his fresh green chillies to the market while the price is more than Nu.10 per kilogram. The price decreases slowly during the season, and when it comes down to Nu.10 or below, he takes his chillies for barter to Bidung (a neighbouring *gewog* in the same *dzongkhag*) to exchange with paddy. Having two different modes of transaction enables farmers to secure necessary food both in terms of quality and quantity. At the same time, having two modes of transaction seems to work as a kind of safety net for farmers. This becomes more obvious when we compare the case in which farmers have only one mode of transaction. For instance, potato growing farmers in Phobjikha usually take almost their entire product to the auction yard in Phuentsholing. The price of potato fluctuates more than fifteen times depending on the year's production and on the harvest in the neighbouring states of India. Therefore, the farmers do not have an alternative to avoid low prices.

### *Discussion*

This section discusses two aspects of chilli trading in Bhutan with reference to the theoretical concerns presented earlier in this paper. Firstly it examines to what extent human networks are working especially in barter transactions, and secondly how these two modes of transaction relate to informal safety nets for people in rural areas.

Concerning the first question, we have shown that barter practices involve social networks more than cash transactions at market places and shops. Barter usually happens with partner communities, using a host to mediate actual transactions. As a result of the socio-economic changes the country has been going through, partner communities have changed over the course of time. But to establish a new partner community, it is necessary to have 'a contact' within a community to start, and the 'contact' usually becomes the host in subsequent transactions. Once one starts transacting with a community, the relationship usually continues for years. The ethnographic data analysed indicate that there are elements of 'human touches'. The "human touch" in this context is synonymous to "feeling obliged". Since people know each other personally they feel obliged to help to get what the other party wants. The flip side of this story is that the person who wants to exchange understands that the other side has done as much as they can, therefore feeling "not right" to complain about

what is offered. This human touch is a kind of social capital. We in this context learn that social capital is not all positive to every party who is engaged in it. It certainly involves a down-side (in this case study, one should not complain about the quality of the product.). Furthermore, attention must also be drawn to other aspects of barter. Some farmers pointed out that they are better off with barter rather than cash transactions in terms of quantity, as well as avoiding some hidden costs such as husking rice and transportation. Clearly there are economic considerations to barter. Barter practices cannot happen purely because of human networks.

The second question concerns how these two modes of transaction can be positioned in terms of safety nets. As shown in the ethnographic narratives, farmers take advantage of both modes of transaction. At market places, the price of green chillies can fluctuate considerably and farmers know the general price trends during the season. They each have individual price levels at which they start to take chillies to barter, where terms of exchange are relatively stable. In other cases, farmers judge that barter is generally more profitable considering all the factors including cost and labour for transportation, processing and packaging. Therefore it is not that either mode works as a safety net for the other, but rather it seems to be the case that having two modes of transaction is of itself a safety net for farmers. It is a diversification of trading channels that helps farmers secure the necessary amount of food.

### *Conclusion*

The paper has presented various aspects of chilli trading in Bhutan. It argues that several factors, economic, social and cultural, interplay to facilitate transactions. Farmers consciously weigh these various aspects. Transactions at market places and shops generally bring cash, the necessity for which is steadily increasing in Bhutan due to changes in the socio-economic situation of the country. Barter transactions are facilitated by human networks, as well as economic considerations. In some circumstances, there are clearly economic advantages to be engaged in barter, for example, where weekend markets and shops are far away, or where a farmer thinks that it is more profitable to take products to barter considering all costs including hidden ones. Barter transactions are also facilitated by farmers' personal and social ties with their hosts, and conforming to certain social norms, such as taking gifts to the host, is part of the transaction.

As we have reviewed, studies on food security to date emphasise more the economic aspects of access to food, while some of the social capital literature (for instance, Boshier, Penning-Rowsell and Tapsell (2007), Grootaert, Oh and Swamy (2002), Houtzager and Pattenden (1999), and Moser (1998)) tend to give an impression that human ties can solve many problems that poor people face. The analysis presented in this paper suggests that social capital (human ties) alone cannot either provide resilience or reduce vulnerability. We would rather understand that having two modes of transactions and the ability to utilise these with an understanding on the positives and the negatives of each mode provides farmers with food security. Social ties are not a panacea. What matters is people's ability to take advantage of them.

The current case study on Bhutan's food security shows that we need an integrated perspective. People's access to food in rural Bhutan has been largely fulfilled through two channels, cash transactions in markets and shops, and barter. Elements which work to facilitate people's access to food are social and cultural as well as economic. Furthermore, barter transactions happen not only with human ties. Overall economic advantage is also one of the major considerations in engaging in barter, and human networks are the primary facilitator of the transaction. While in preceding studies on food security, access to markets has been a major focus, the case of Bhutan indicates that relying only on markets does not secure people's access to food. Having two (or more) channels secures people's access to food far more firmly.

Throughout the paper, it has been demonstrated that the Bhutanese people try their best to secure enough chillies for their own households. It is not an exaggeration to say that households in Bhutan which lack chillies are not food secure. This situation of food insecurity cannot be captured in the conventional measurement of food security. Given the diversity of eating practices around the world, there must be many other food items which are considered vital in some areas of the world, but not included in the measurement of food security. Chilli in Bhutan is one such example. The concept and measurement of food security should incorporate such cultural preferences at its core. This should make the concept more sensitive to different eating practices in the world.

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