INDIA'S INFORMAL TRADE WITH BANGLADESH AND NEPAL: A QUALITATIVE ASSESSMENT

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Foreword

Informal trade within countries of South Asia continues to thrive despite unilateral trade liberalisation in these countries and regional trade liberalisation under the South Asian Preferential Trading Arrangement. This calls for an in-depth analysis of the underlying factors that cause such trade and the institutional framework which supports it. This study of informal trade flows between India, Bangladesh and Nepal by Nisha Taneja and Sanjib Pohit focuses on the nature of markets in informal trade, the types of mechanisms supporting information flows as well as the issues with respect to governance of contractual relations in these markets. The study also analyses the nature of differences between participants in formal and informal trade both in terms of institutional arrangements and firm attributes. The basic framework for the study is drawn from *new institutional economics*. An extensive primary survey was conducted in the three countries to get the empirical data base for the analysis.

The study suggests that informal traders in India, Bangladesh and Nepal have developed efficient mechanisms for information flows, risk sharing and risk mitigation. Further, informal traders prefer to trade through the informal channel due to the inefficient institutional framework in the formal channel and not due to trade policy barriers. The survey reveals that the transaction costs of trading in the informal channel are significantly lower than in the formal channel in both Indo-Bangladesh and Indo-Nepal trade. The principal policy implication from the study is that unless the transacting environment of formal traders improves, informal trade will continue to coexist with formal trade, even if free trade is established in the SAARC region.

The study has been funded by the South Asia Network of Economic Institutes (SANEI). I hope this study will contribute to the larger understanding of issues in informal trade in the South Asian region.

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Introduction[*]

The focus of our study is on India's informal trade with Bangladesh and Nepal. At the outset, it is important to clarify what *informal* means. The term *informal* has been used to denote (a) illegal economic activities, by others to denote (b) *parallel* markets (i.e. those unregulated by the government) and by still others to mean (c) *extra-legal* activities. Clearly, there is an illegal component to informal trade if we consider trafficking in drugs, narcotics, or arms. In addition, if informal trade refers to pure smuggling of goods across borders, i.e. it is taking place primarily to circumvent tariff and non-tariff barriers, it could be termed as illegal trade. However it is entirely possible that a significant part of informal trade is in the nature of extra-legal trading, tolerated in practice even if illegal in the letter of the law. This occurs due to the fact that the governance of state machinery does not extend to all corners of society in poor countries.[1] For instance, informal trading enterprises would be those that are unregistered and unlicensed. In the context of the present study, all three definitions are relevant.

In recent years, the countries of South Asia have adopted not only unilateral trade policy reforms but have also undertaken multilateral liberalisation under the auspices of WTO. Moreover, the South Asian countries of Bhutan, Bangladesh, India, Maldives, Sri Lanka, Pakistan, Nepal took a major initiative towards greater regional economic co-operation in 1991, when it was decided to establish a SAARC Preferential Trading Arrangement. Since then three rounds of South Asian Preferential Trading Arrangements (SAPTA) have been concluded and negotiations for the fourth round are currently in progress. In quantitative terms, this implies that 3152 commodities and 47 sectors at the two digit levels have been offered for concessions under the three rounds of SAPTA. The member countries have also envisaged the formation of a South Asian Free Trading Arrangement (SAFTA) by 2001. Even though this indicates a progress towards a sectoral approach, the trade coverage of these sectors remains very low. This raises strong doubts about the progress in trade liberalisation in the SAARC region.[2] According to ESCAP's survey, the intra-regional trade in South Asia was to the tune of only 3 per cent of GDP in 1995.

With the slow progress under SAPTA India has gone ahead with lowering tariffs on a bilateral basis with other SAARC members. In fact under the bilateral Free Trade Agreement between India and Nepal the Government of India provides

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access to the Indian market free of customs duties and the quantitative restrictions for all articles manufactured in Nepal. Nepal on the other hand has provided a blanket concession of 20% on all imports from India. Thus the import duty charged on Indian goods is 20% lower than the unilateral import duty rates. Additional duties wherever imposed on imports into Nepal is waved on imports from India.

If existing evidence suggests that SAPTA may not enhance trade in the region, what are the other mechanisms that would inject vitality into trade flows in the region? One way would be to focus on the large and vibrant informal trade that India has with its neighbours namely Bangladesh and Nepal estimated to be at least as large as formal trade.[3] If such trade is brought within the ambit of official trade, a significant increase in total trade could be witnessed. In this context, it is important to understand the elements underlying the vitality of informal trading arrangements since they may provide valuable clues towards policies to rejuvenate SAARC trading as well as identify the bottlenecks of formal trading arrangement in SAARC. Since India shares its border with almost all the South Asian countries it is natural that India is the central actor in informal trade within South Asia. In the light of this observation, the present study analyses issues in India's informal trade with Bangladesh and Nepal -both in terms of its *raison d'être* as well as the institutional aspects of its functioning.

The plan of the rest of the paper is as follows. Section 2 discusses the issues of informal trade that are of importance in the context of India's informal trade with Bangladesh and Nepal while Section 3 elaborates on the analytical framework in which issues in informal trade would be analysed. Section 4 presents the survey results on Indo-Bangladesh informal trade while Section 5 gives an account of the Indo Nepal survey. Finally, the concluding section synthesises the findings of the two case studies.

Issues in Informal Trade

There are two sets of issues of interest in the context of India's informal trade with Bangladesh and Nepal: (i) what is its size, and (ii) what is its nature- in terms of both its *raison d'etre* as well as the institutional aspects of its functioning. The size aspect is important in terms of the commodities traded, their volume, and value. It would tell us the extent to which trade in the region could be invigorated as well as extent of revenue lost to the exchequer of the concerned governments. The concern in the latter would be: (a) what are the characteristics of informal trade, (b) why it takes place, (c) how it differs from formal trade; (d) and what implications it has for regional agreements on formal trade.

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[3]   According to Chaudhuri (1995), India's informal exports and imports in 1992-93 were to the tune of US $ 299 and US $ 14 millions respectively. In the same year, official exports and imports were about US $ 349 and US $ 8 millions respectively. According to Muni (1982) India's informal trade with Nepal was $ 626 million in 1989. In the same year official trade was $ 62.6million.

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In the past, only a few studies on informal trade between India and Bangladesh have been undertaken. All these studies have primarily focussed attention on estimating the size of informal trade. Among them, Chaudhari (1995) provides the most comprehensive account of estimates of informal trade between India and Bangladesh.[4] The estimates on Indo-Nepal informal trade are at best guess-estimates. Against this perspective, our study attempts to throw light on the institutional mechanism by which such trade is undertaken.

To the extent that informal trade is taking place, due to high tariffs and non-tariff barriers in the region, it is reasonable to expect such trade to shift to legal channels with removal of trade barriers. However, free trade agreements (FTA) require rules of origin to ensure that goods from third countries passing through another member country of the FTA meet domestic content requirement before arriving at the final market for consumption to benefit from duty free entry. Such rules of origin can be complex and sometimes provide the excuse to block official trade making informal trade an attractive option. In fact there will be scope for flouting the rules of origin as long as there are tariff differentials in the region. Goods will move informally from a low tariff country to a high tariff country.

Illegal trade could also take place due to domestic policy distortions. For instance, a trader has the incentive to siphon off subsidised items from the public distribution system to the neighbouring countries if such commodities fetch higher prices across the border. Illegal trade of this kind can be checked only if domestic reforms address such policy distortions.

If there are factors other than trade and domestic policy barriers that determine informal trade, then a deeper understanding is essential. There could be several institutional and non-economic factors that influence informal trade. It may be possible that an efficient institutional arrangement exists, which supports informal trade. If this is so, trade through informal channel may actually be preferred.
It is also possible that the informal channel has a better payments mechanism. At the same time it is possible that the informal channel has a good marketing distribution network. These factors would attract traders to the informal channel. If goods are produced locally by small firms, then localised informal trade may be cheaper than trade through formal channels in branded goods. For example, an importer in Bangladesh or Nepal may find it cheaper to import informally plastic products from small firms in the bordering Indian states than import branded products from other states in India.

On the other hand, if the infrastructure supporting formal trade is weak and costs of trading increase substantially with higher volumes, some of it may spill over

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[4] The study applies the 'Delphi' technique in the first stage for selection of the sampling frame and in the next stage to estimate informal trade.

into informal trading.[5]   A distinctive feature of the South Asian countries is the inadequate transit and transport systems. This often results in high transport costs in the region and creates a strong incentive for trade to take place through informal channels. [6] At the same time, the high transport costs in the "melting iceberg" context would lead to greater informal trade in perishable commodities (like foodstuffs) than in manufactured items.

There are other barriers to official trade, which make informal trade a preferred option. In particular, the official machinery through which formal traders have to operate may be very cumbersome causing delays and thereby escalation in costs. Moreover, the rent-seeking activities of the public servants at each step of transactions may dissuade traders from using the official channel. It is also possible that banking facilities are inadequate and traders therefore have to use the informal channel for trading.

There are other factors, non-economic in nature. It has to be kept in mind that the economies of South Asia are in many ways quite different from other developing economies that have formed in the past or are presently contemplating preferential trading blocs. Unlike most of them, prior to the 1947 partition of the sub-continent, Bangladesh, Pakistan, and India were in fact a single country politically, economically and monetarily. This historical fact continues to be relevant since a large part of the illegal trade flourishes because of the traditional, historical, and ethnic links. Another factor that could be an important determinant of informal trade flows is that the traders with lower education may actually have lower access to formal channel.

Developing an understanding of what exactly are the elements that underlie the vitality of informal trading arrangements may provide valuable inputs towards policies for greater intra-SAARC trading.

Framework for Analysis

Our study focuses on the following three issues relating to informal trade:
institutional arrangements under formal and informal trade;
relative importance of institutional factors vis-à-vis those arising out of trade and domestic policy distortions;
characteristics of formal and informal traders in terms of various attributes.

The basic framework for our analysis is drawn from *new institutional economics*.

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[5]   If there is absence or shortage of warehousing facilities, informal channel will be preferred.

[6]   For instance the transit authorities at the Petrapole-Banapole border between India and Bangladesh are closed three days a week, resulting in no trade on these three days. Trucks have to wait for 8-10 days before documents are endorsed and checked at the customs before crossing the border (see Taneja 1999).

What demarcates formal traders from informal traders? Under formal trading arrangements, the recourse to law defines contracts between two contracting parties. This ensures that goods move across borders and payments are guaranteed. On the other hand contracting parties in informal trade cannot resort to the law. As a simple example, consider what would happen in case of a contractual dispute between two cross border parties trading informally. Obviously, they would not be able to take recourse to formal courts in either of the two countries. Consequently, it is reasonable to assume that individuals trading through informal channel have developed (parallel) institutional mechanisms for dispute settlement. Also, why is it that the informal trading arrangement may be preferred over the formal trading arrangement even in the absence of trade and domestic policy distortions?

Institutions are defined as the conventional norms and social rules that constitute the framework within which socio-economic interactions are embedded.[7] The focus here is on analysing institutions in the formal and informal trading arrangements. The specific issues underlying the discussion include, for example, how firms enter into informal trading, the nature of information structure supporting informal trading activity, nature and extent of risk pooling and sharing, risk mitigation, nature of linkage with formal trading, mode of financing, etc. In addition, one needs to analyse whether informal traders exhibit low education level implying less access to formal channel or whether ethnic linkages across the border act as a stimulus for the vibrant informal trade.

While both institutional arrangements i.e. the formal and informal carry out transactions in goods across borders, they are carried out at a cost broadly defined as transaction costs. These costs include those of organising, maintaining and enforcing the rules of an institutional arrangement. Since there are always institutional arrangements that can perform a particular institutional function, with given transactions costs, one institutional arrangement may provide more services and hence be more efficient than another. A rational behaviour would imply that a more efficient institution should be preferred over less efficient one.[8] In our case, we hypothesise that transaction costs of operating through the informal channel are less than those under formal trading. If this is true, such trade may not shift to legal channels and may in fact co-exist with formal trade.

Given the nature of the study, it is obvious that we need to obtain primary data for analysing the above issues. The study is based essentially on a survey approach covering India Bangladesh and Nepal. While an attempt has been made to identify all possible factors affecting informal trade in a common framework, some country specific differences are expected to occur. For instance, there are two factors which are unique to Indo-Nepal informal trade.

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[7]   See Lin and Nugent (1995)

[8]   See Coase (1937, 1960) and Williamson (1975, 1985)

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First, India and Nepal already have a Free Trade Agreement. This is in contrast to Indo-Bangladesh where such an agreement has not been signed between the two countries as yet. Second, since Nepal is a land-locked country, the transit treaty between India and Nepal ensures that Nepal has official access to goods that it is trading in with the rest of the world. The violation of the transit treaty has led to a unique form of informal trade. The survey instrument was designed to take into account country specific factors.

Case Study of India-Bangladesh Informal Trade

This section describes the finding of the survey carried out in the border areas of India and Bangladesh. Since the study is based on primary data, the analysis begins with the sampling frame. Given the institutional focus of the study, the rest of the analysis focuses on profile of informal and formal traders, their transacting environment and their discriminating characteristics.

Sampling Frame

Bangladesh has a long and porous border with India covering three of India's states, namely West Bengal, Assam, and Tripura. Ideally, one should select samples of Indian traders for the study from all three states of India. Also, one needs to select traders from the corresponding border region in Bangladesh to analyse whether transacting environment of formal/informal traders in Bangladesh differ significantly from the Indian counterparts. However, time and cost considerations compelled us to draw our sampling units only from the border districts of West Bengal.[9] Accordingly, the sampling units of Bangladeshi traders are drawn from the western side of Khulna and Rajsahi divisions of Bangladesh, which span the border district of West Bengal.

It was also, ex-ante, decided that contraband high-value goods like gold, silver, diamonds, narcotics, arm and ammunition etc. would be kept outside the purview of the study. This was done with the twin purposes of obtaining better quality of responses and at the same time reducing the risk of canvassing the questionnaire.

Information on nature and extent of informal trade between India and Bangladesh is scarce. There are only two studies- Chaudhuri (1995) and Bakht (1996)- which provide some evidence on volume of trade, important centres of informal trade, and the commodities traded. However, the studies are silent on the number of active informal traders on either side of border. Consequently, it was decided to cover an equal number of traders for formal and the informal sectors.

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[9]   According to Chaudhuri (1995), West Bengal accounts for as much as 96% of illegal exports to Bangladesh. We have therefore chosen West Bengal as our survey area in India.

Given the time and cost considerations, it was decided to select 50 traders in each country under each category for our survey. In other words, we have in all a sample of 200 traders.

4.1.1 Selection of Indian Traders

Formal Traders

According to official statistics, Petrapole accounts for about 2/3rd of the total official trade between India/Bangladesh. So, we have selected 30 (out of 50) respondents from traders who export/import various commodities through Petrapole. A list of all agencies/traders exporting different commodities to Bangladesh was prepared from the registers kept with the office of Assistant collector of Customs, Petrapole. The registers included names of traders from all over the country.[10] The traders from only West Bengal are included in the list. The final list reveals the following characteristics of traders exporting goods to Bangladesh:
traders from towns like Petrapole, Bongaon, Madhyamgram and Barasat etc lying within a distance of 50 km from the border;
traders exporting/importing from Calcutta.

The above list is used to select randomly 10 traders from Calcutta and 20 traders from Petrapole and nearby towns trading through Pretrapole taking into view the relative size of the two categories of traders.

The rest of the 20 traders are selected from the other three important trading centres, namely Hilli (15 traders), Mohodipur (3 traders) and Radhikapur (2 traders) keeping in view the size of trade from these places.[11]

Informal Traders

As noted earlier, it was decided that a total of 50 informal traders would be selected. As a starting point, informal trade centres in West Bengal were identified on the basis of the study by Chaudhari (1995). Subsequently, the centres were visited to discuss the main features and dimension of informal trade between India and Bangladesh with a number of knowledgeable officials and non-official people to find out whether any significant changes had occurred in their status as centres of such trade. Obviously, it is not possible to prepare a sampling frame for selecting informal traders. Consequently, the list of informal traders to be interviewed in different centres was prepared on basis of discussions with knowledgeable persons. It should be mentioned that our list of

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[10] The names of traders are from Delhi, Ahmedabad, Jaipur, Pune, Mumbai, Jullunder etc

[11] Similar to the earlier case, the lists of all agencies/traders were prepared from the registers kept in the custom offices of the respective centres. The sample of traders for our study is drawn randomly from these lists.

traders included only those who were organisers of trade and not carriers of smuggled goods across the border. The following table shows the centre-wise distribution of informal traders.

Table 4.1.1-1
Distribution of Informal Traders

Districts in West Bengal	Centre	No. of Respondents
24 Parganas	Petrapole	5
	Bagdaha	5
Nadia	Mejdia	10
Murshidabad	Lalgola	10
Malda	Mohidpur	5
North Dinajpur	Radhikapur	5
	Kaliaganj	5
South Dinajpur	Hilli	5

4.1.2 Selection of Bangladeshi Traders

Formal Traders

The discussion with officials in Bangladesh revealed that from their perspective, there were 5 important centres of formal trade in Rajsahi and Khulna division of Bangladesh accounting for most of the cross-border trade with centres in West Bengal. However inspite of best effort, it was not possible to find out the relative importance of these centres. So, it was decided to select respondents equally from each of these centres (see Table 4.1.2-1 below). Similar to the Indian case, we have prepared lists of Bangladeshi agencies/traders for each centre from the registers kept with the respective offices of custom department in Bangladesh. The formal traders were randomly selected from these lists.

Table 4.1.2-1
Distribution of Formal Traders in Bangladesh

Division in Bangladesh	District	Centre
Rajsahi	Lalmonirhat	Burimari
	Nawabganj	Sonamasjid
	Dinajpur	Hilli
Khulna	Jessore	Benapole
	Chuadanga	Darshana

Informal Traders

The discussion with Bangladeshi officials in Rajsahi and Khulna divisions (bordering West Bengal) indicated that there are 9 important centres for informal trade in these two divisions. Subsequently, all these centres were visited to find out the main features and dimensions of informal trade between India and Bangladesh from knowledgeable officials and non-official people. The names of the centres along with number of respondents selected from each of them are shown in Table 4.1.2-2. As this table shows, we did not select equal number of traders from these centres. The simple reason is that our discussion led us to arrive at a sort of ranking of the centres in the order of importance, which we captured by choosing more traders from centres of higher importance. Expectedly, it is not possible to prepare exhaustive lists of informal traders exporting through these centres. Instead, information solicited from these people was used to prepare list of informal traders to be interviewed at various centres. Typically, the list contained more than 50 names of traders, in case a trader refused to provide information.

It has to be kept in mind that while formal traders were selected randomly from lists of registered traders, the selection of informal traders was done on the basis of information obtained from knowledgeable persons. Such a selection procedure may lead to biased sample. Thus, given the nature of the sample of informal traders, the survey estimates may only be indicative and not firm estimates.

Table 4.1.2-2
Distribution of Informal Traders in Bangladesh

Division in Bangladesh	District	Centre	No. of Traders
Khulna	Chuadanga	Jibannagar	10
	Jessore	Benapole	9
	Kushtia	Pragpur	5
	Chuadanga	Darshana	3
Rajsahi	Rajsahi	Godagari	6
	Dinajpur	Ghoraghat	6
	Lalmonirhat	Burimari	5
	Nawabganj	Sonamasji	3
	Dinajpur	Hilli	3

Profile of Informal and Formal Traders

This section highlights the salient features of formal as well as informal traders as revealed by our survey. The responses of traders in both Bangladesh and Indian territories are tabled so that cross-border differences/ similarities can be highlighted.

Trading Activity

The profile of informal traders in Bangladesh reveals that while all 50 (100%) traders were importing informally, 46 (92%) of the respondents in the formal channel were importing formally (see Table 4.2-1). Only 5 (10%) were found to be exporters in the informal channel and 8 (16%) in the formal channel implying that import is the predominant trading activity for both informal and formal traders. In India, all 50 (100%) respondents in formal as well as informal channel were found to be engaged in exporting activity. Imports were carried out by only 9 (18%) traders in the informal sector and 6 (12%) in the formal sector. Clearly export is the predominant trading activity of Indian traders in both channels.

Table 4.2-1
Trading Activity

Category of Trader	Respondents in Bangladesh		Respondents in India	
	Informal	Formal	Informal	Formal
Exporter	5	8	50	50
Importer	50	46	9	6
Domestic market	23	36	4	17
Formal	7	-	3	-
Informal	-	-	-	-
Total respondents	50	50	50	50

Do the informal traders trade only informally or do they also use the formal channel? Table 4.2-1 indicates only 7 (14%) of the informal traders in Bangladesh traded through both channels implying that informal traders have a weak link with the formal channel. The same is true for Indian traders.

Further 23 (46%) informal Bangladeshi traders sold their goods in the domestic market while only 4 (8%) informal Indian traders sold in the domestic market. Selling in the domestic market provides a cover for informal trading. The fact that Indian informal traders did not need such a shield shows that they may have other mechanisms for protecting themselves. Note that formal traders in Bangladesh had a marked presence in the domestic market. To a lesser extent, the same is also true for formal traders in India (see Table 4.2-1).

Commodities traded

Table 4.2-2 presents percent of respondents trading in each commodity groups. The respondents were found to be trading in item that belonged to more than one commodity group. Our survey indicates that food was the predominant commodity imported in both channels from India to Bangladesh (see Table 4.2-2). Apart from food, textiles and consumer goods are traded predominantly from

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India to Bangladesh in the informal channel. However, primary products are important trading items in the formal channel.

At a disaggregated level, the survey revealed that food items namely, onion and rice, consumer goods particularly, sugar, salt, phensydil, and textiles mainly, sarees, ready- made garments are traded informally. On the other hand, food items, namely, rice, pulses and onions were traded by a majority of respondents in the formal channel. In addition, formal traders traded in primary commodities, namely, stones, cement, and coal. The detailed list of items traded in both channels is given in the tables A-1 and A-2 of appendix.

In the Indian territory, commodities exported in the informal channel were similar to those imported in Bangladesh. Informal traders traded mostly food items, textiles and machinery while in the formal channel exporters traded in food and primary products.

Table 4.2-2
Commodities Traded

Nature of commodities	Percent of Respondents					
	Bangladeshi Traders		Indian Traders		India to Bangladesh*	
	Inform-al	Formal	Informal	Formal	Informal	Formal
Food	54	70	76	80	65	75
Machinery	22	17	20	4	21	11
Textiles	42	4	34	20	38	12
Consumer	32	4	74	14	53	9
Primary	4	50	8	46	6	48
Others	2	9	2	2	2	0

*It represents average percentages of commodity flows of Bangladeshi and Indian traders
** Includes intermediate goods

Informal traders were asked how many commodities they traded annually. This parameter was used to gauge how specialised informal trade is vis-à-vis formal trade. In the Bangladesh territory, 66% of informal traders imported less than four commodities corresponding to 48% of formal traders (see Table 4.2-3). On the Indian side, the informal traders seemed to have a more diversified trading pattern than the formal traders do as more of them were trading in 4 to 6 or more than 6 commodities.

Table 4.2-3
Number of Commodities Traded

	Percent of Respondents		
Bangladeshi Traders	**< 4**	**4 to 6**	**> 6**
Informal	66	34	-
Formal	48	46	6
Indian Traders	**< 4**	**4 to 6**	**> 6**
Informal	38	54	8
Formal	56	40	4

Entrepreneurial Attributes

Information was sought on the following two aspects: (a) on the level of education of formal and informal traders and (b) whether traders in the two channels had ethnic ties with the corresponding trading partners. The survey revealed that formal traders were, by and large, more educated than informal traders (see Table 4.2-4). Another point is that the level of education of the traders was higher in India than in Bangladesh indicating that the former has a higher education level.

Table 4.2-4
Level of Education

Type of Traders	Percent of Respondents			
	Below middle school	**Up to middle school**	**Secondary level**	**Graduate & above**
In Bangladesh				
Informal	32%	52%	16%	0
Formal	0	14%	45%	41%
In India				
Informal	12%	52%	32%	4%
Formal	2%	2%	28%	68%

Traders were also asked whether they had ethnic ties with their trading partners. Among the Bangladeshi traders, 48% of the informal traders claimed that they had ethnic ties while 54% of the formal traders said they had ethnic ties. On the other hand, 50% of the informal traders in India had ethnic ties corresponding to only 14% in the formal channel.

## Transacting Environment of Informal Traders

The transacting environment of informal traders needs to be analysed in terms of sourcing of goods, nature of markets in informal trade, the types of mechanisms for the flow of information on trading opportunities as well as the governance of

contractual relations in informal markets. The survey instrument was designed to shed light on the enforcement mechanisms of informal trade.

4.1.2 Sourcing of Goods

An aspect that needs to be examined is whether informal trade is carried out in locally produced goods. If goods traded informally are predominantly produced locally in the border region, then one can presume that cross-border trade would be a natural option for local traders. But, if informal traders in India deal in goods that are procured from other states, then informal trade is clearly much more organised. In fact, it is as organised or better-organised than formal trade for, it implies that there is a sourcing network which connects other Indian states as well.[12] Informal traders in India were asked what proportion of traded goods were procured locally and from other states. Graph 4.3.1-1 demonstrates that items traded informally are procured mostly from other states.[13] What was noticeable was that food items were procured from other states - 33 respondents exporting food items to Bangladesh claimed that they procured over 60% of their food items from other states. Similarly, 8 of the respondents exporting textiles claimed that they procured over 60% of the their items from other states. All other items like, machinery and consumer goods were procured largely from other states.

Graph 4.3.1-1 Sourcing of Goods(India)
All commodities
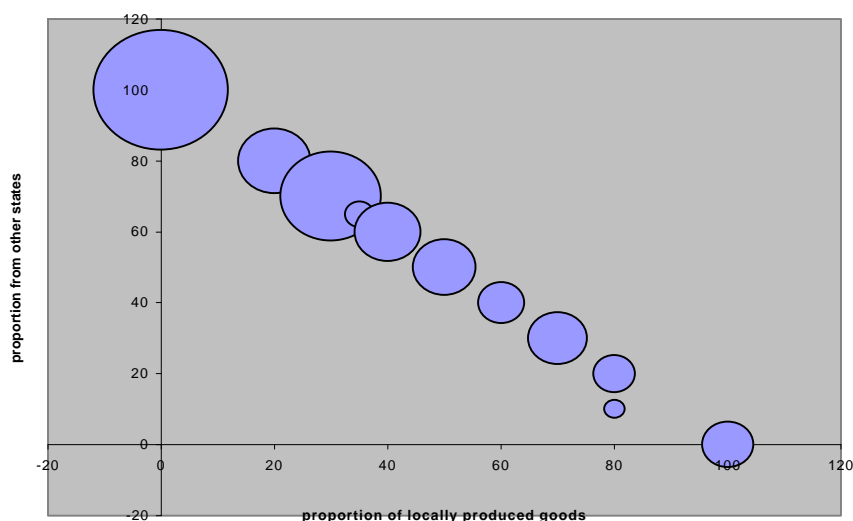
Another aspect concerning procurement of goods for informal exports was whether there was a significant leakage of administered price goods from the

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[12] Because of its large size, this point is relevant only for India.

[13] For drawing the graph, we have clubbed leakage from ration shops with locally produced goods. The size of the bubble represents concentration of respondents at this point.

Public Distribution System. Chaudhari (1995) in his study points out that the PDS outlets in the border districts of West Bengal get their supplies from the PDS in excess of their local needs. These commodities are then exported informally to Bangladesh. Our survey revealed that there were 15 respondents exporting food items who reported that they were procuring their supplies from the Public Distribution System. However, 12 of them reported that they procured less than 20% from the PDS (see Graph 4.3.1-2). Other than food items, there was also evidence that essential consumer items were procured from the PDS. Nine respondents confirmed that goods came from the PDS outlets and all of them claimed that they obtained more than 60% of these items from the PDS (see Graph 4.3.1-3).

Graph 4.3.1-2 Sourcing of goods-India
Food
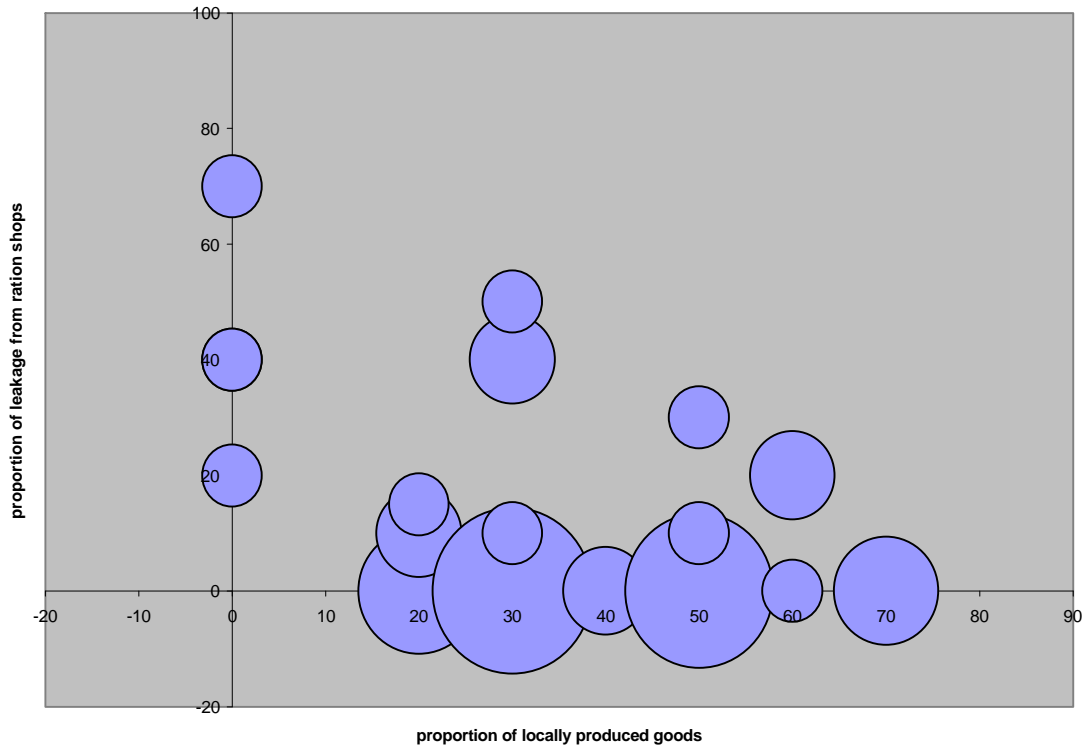
Graph 4.3.1-3 Sourcing of goods-India
Essential Consumer Items
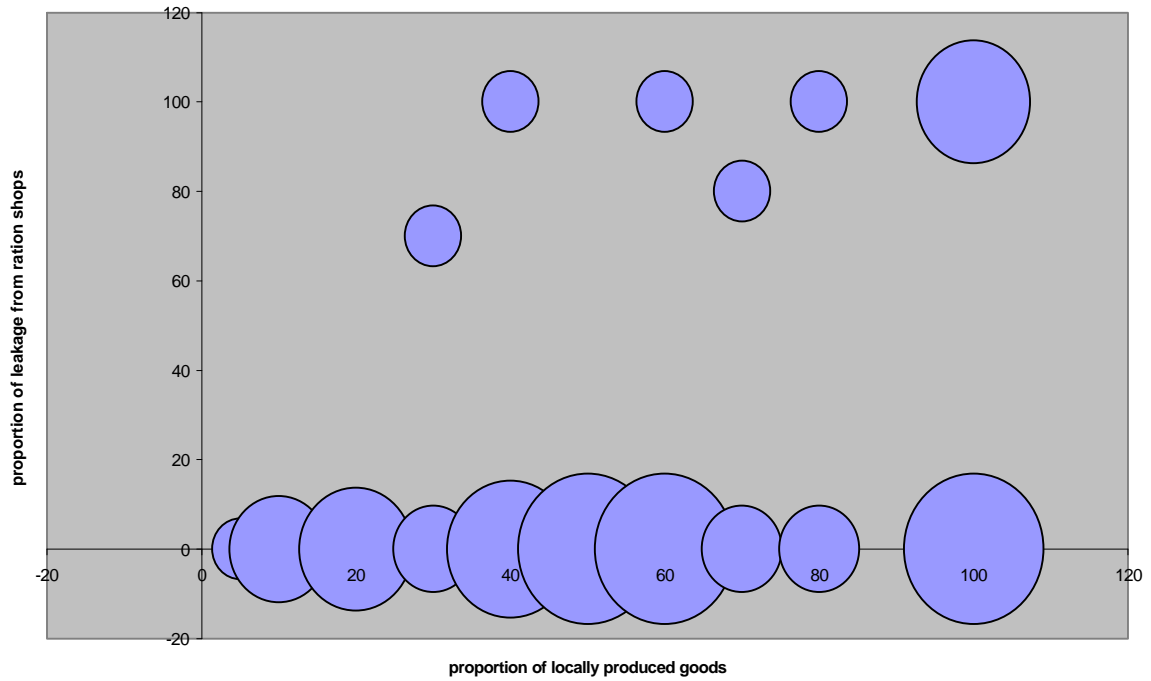
4.3.2 Entry into Informal Trading

How difficult is entry into informal trading markets? Are entry costs high? Are such markets characterised by high rate of entry and exit? The questionnaire of the survey was designed to solicit information on these issues. Given that such markets are characterised by information asymmetries between exporters and importers, firms were asked how they entered informal trading. The survey revealed that in the absence of formal contracts between trading partners, the informal trading arrangements were characterised by non-anonymity of transaction. Thus, 74% of respondents in either Bangladesh or India entered through a friend or relative (see Table 4.3.2-1).

Entry into informal trading also involves a cost. According to Table 4.3.2-2, 60% of respondents in Bangladesh paid a commission between 10% to 20% of their turnover just to make an entry into informal trading. On the Indian side entry costs were relatively lower. All traders paid a commission of less than 10% of their turnover.

Table 4.3.2-1
Entry Characteristics of Informal Traders

	Percent of Respondents		
Entry in informal trading	**Friend**	**Relative**	**Own initiative**
Bangladesh	40	34	26
India	62	12	26
Commission paid for entry	**<10%**	**10% to 20%**	**>20%**
Bangladesh	22	60	18
India	100	-	-
Rate of entry/exit	**High**	**Medium**	**Low**
Bangladesh	10	74	16
India	38	58	4
Age of firm (years)	**<5**	**5-9**	**>9**
Bangladesh	28	54	18
India	28	46	26

Information was also sought on whether informal trading markets were characterised by high rates of entry and exit. Traders were asked to give their perception of the rate of entry and exit into informal trading on a scale ranging from high, medium to low. The survey in Bangladesh shows that the modal range was medium for 74% of the respondents. In the Indian territory too, the modal range was medium rate of entry/exit in informal trading. The important point is that informal trading markets are not characterised by high rates of entry and/or exit. A related variable was the age of firms. In other words, we wanted to know whether firms in informal trade were new firms or whether they had been in the trading activity for a long time. If the informal trading market is not characterised by high rates of entry and exit, then such firms should be relatively old firms. This

hypothesis is confirmed by the survey results. According to Table 4.3.2-1, 54% of the firms engaged in informal trading in Bangladesh have been trading for five to nine year while in India 46% of the firms were found to be in the same range. This shows that firms trading through informal channel are by and large established firms.

Information Channels

Informal trade hinges on how traders can obtain information on commodities and quantities to be traded. Traders in Bangladesh were asked how they acquired such information. Respondents were asked about various sources, with the choice of ticking more than one option. The survey shows that informal traders in both India and Bangladesh relied mostly on distribution networks, followed by personal trips to procure relevant information (see Table 4.3.3-1). Clearly, the distribution network serves a dual purpose of both marketing and information channel. Yet another important source of information for Bangladeshi traders was the enforcement agencies. Official media was also considered an important source of information for informal trading in Bangladesh. One possible source of information is the traders' link to the formal channel. The survey revealed that this was a comparatively weak link in both India and Bangladesh. Thus even without a strong dependence on the formal channel, informal traders have developed a mechanism for getting hold of relevant information. The survey also confirms that traders in Bangladesh and India were not organised enough to arrange trade fairs that would provide them with information (see Table 4.3.3-1).

Table 4.3.3-1
Sources of Information of Informal Traders

	Percent of Respondents	
	In Bangladesh	**In India**
Authorised channel	28	14
Personal trips	80	88
Distribution network	92	72
Official media	46	18
Enforcement agencies	64	10
Trade fairs	14	6

Note: Traders had the option of ticking more than one option.

Informal traders were also asked whether they were selling in the domestic market prior to entry into informal channel. Selling in the domestic market may have given traders access to information on informal trading. In Bangladesh, 30% of traders were engaged in selling in the domestic market prior to trading informally implying that trading domestically may have served as an information channel to trade informally. On the other hand, only 12% Indian traders were found to be selling in the domestic market prior to entering cross-border trade.

Given the institutional focus of the study, the stance of the questionnaire was directed towards eliciting information on contractual arrangements between informal trading partners. Respondents were asked how their trade deals were finalised with the alternatives of ticking more than one option. The relevant facts are shown in Table 4.3.3-2. In the absence of formal contracts between trading partners, 82% of respondents in the Bangladesh territory concluded trade deals through advance payment.

In the Indian territory, informal traders preferred to deal with trading partners with whom they had had prior dealings. Reference from a third party, implying that a third party that knew both trading partners was also an important instrument for finalising trade deals. In the Indian territory, confirming non-anonymity of trading partner was an important factor for finalising trade deals. The infrequent use of collateral provides indirect evidence supporting absence of significant information asymmetries among transacting individuals.

Table 4.3.3-2
Finalisation of Trade Deals

Modes	Percent of Respondents	
	Bangladeshi traders	**Indian traders**
Advance payment	82	36
Collateral used	0	22
Prior dealing	28	50
Third party reference	10	42
Goods on credit	30	24

Note: Respondents had the choice of ticking more than one option.

Risk

Respondents in informal and formal markets were asked about the risk attributes arising out of the transacting environment. Importers in Bangladesh were asked about the degree of risk regarding goods not conforming to specifications, default, and delay in delivery of goods. Exporters in India were asked about the risk in default in payment, delay in delivery of goods and loss that might occur due to seizure of goods. The relevant facts are shown in Table 4.3.4-1. As this table shows, the incidence of risk was very low in Bangladesh as well as in India.

Table 4.3.4-1
Extent of Risk of Informal Traders

	Percent of Respondents	
	In Bangladesh*	In India*
Goods not conforming to specifications:	44 (never)	
Incidence of default in delivery of goods	60 (rarely)	
Incidence of delay in delivery of goods:	52 (rarely)	92 (rarely)
Default in payment		52 (never)
Incidence of goods lost due to seizure		98 (rarely)

*Percent of respondents in modal class; labels in parentheses refer to modal range in options: never, rarely, and frequently.

When Bangladeshi traders were asked to quantify the proportion of output lost due to default, 54% of the respondents stated that they lost less than 10% of their output. Indian traders on the other hand faced lower losses- all respondents stated that they lost less than 10% of their output (see Table 4.3.4-2). Clearly, even in the absence of any formal contractual agreement, informal trades did not face any significant losses. Moreover, the probability of being caught is not very high- 58% of the informal traders in Bangladesh felt that the probability of getting caught by enforcement agencies was between 0.05 to 0.1. The probability of being caught in India was still lower: 72% stated that the probability of being caught was less than 0.05. An interesting feature was none of the respondents in Bangladesh and India felt that probability of getting caught could exceed 0.2. Moreover, even when goods are caught, the penalty is not heavy. The maximum penalty amounts to the consignment being seized in which case the loss to the trader is the value of the consignment.

Table 4.3.4-2
Assessment of Risk for Informal Traders

	Percent of Respondents			
Prop of output lost due to seizure	<10%	10%-40%	40%-50%	>50%
Bangladesh	54	38	8	0
India	100	0	0	0
Probability of goods being seized	<.05	0.05-0.1	0.1-0.2	>0.2
Bangladesh	24	58	18	0
India	72	26	2	0

Another aspect that needed to be investigated was the nature of risk sharing arrangements between the trading partners. Respondents were asked how trading partners shared risk in case of seizure. According to Table 4.3.4-3, 76% of Bangladeshi traders felt that the risk was borne equally by both trading partners in case of goods being seized while 80% of the Indian traders felt that risk was borne primarily by the sender of goods.

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Table 4.3.4-3
Risk Sharing Arrangements

Risk sharing in case of seizure	Informal Traders (Percent of Respondents)			
	Equally	Primarily by sender of goods	Primarily by receiver of goods	Third party
Bangladesh	76	8	14	2
India	2	80	0	18

An interesting risk sharing arrangement in case of goods being seized was discovered in the course of the survey. Cross-border trading is carried out through a network of agents in both countries. At some point in the network, goods are transferred from the sender to the receiver. This point of crossing over from the sender to the receiver of goods could take place either in Indian or in the Bangladesh territory. A number of respondents mentioned that risk is borne by the sender till the goods are delivered to the receiver. From that point onwards, the risk is borne by the receiver. In case the goods are seized at the border, then risk is shared equally between the trading partners. The fact that in Bangladesh risk is shared equally only points out that these traders may have faced seizures at the border. On the other hand the Indian traders felt that risk was borne primarily by the sender implying that goods were handed over to the agent of the trading partner in the Indian Territory.

Respondents were also asked about how risk was shared between trading partners in case of default in quality and delay in delivery of goods. It has to be kept in mind since goods are mostly moving from India to Bangladesh, traders in Bangladesh are receivers of goods while traders in India are senders of goods. While 68% of the Bangladeshi traders felt that the risk was borne by the sender of goods, 34% of the Indian traders felt that the risk was borne by the receiver of goods. The role of third party in mediating on matters of delay was also found to be insignificant. The survey only goes to show that in case of delay there is clear indication of 'passing the buck'.

Informal traders have developed several mechanisms to assuage the extent of risk. As mentioned earlier non-anonymous transacting is an important characteristic of informal traders. This is an important mechanism for minimising risk. To mitigate risk, informal traders obviously make payments to enforcement agencies. Respondents were asked what percentage of their turnover was paid to enforcement agencies to ensure that goods were not seized. The relevant data are shown in Table 4.3.4-4. As this table shows, 60% of the Bangladeshi traders paid bribes between 3% to 6% of their turnover, 78% of the Indian traders paid between 1% to 3%. Moreover, the bribes did not exceed 10% in either country. To diversify risk, one obvious way for informal traders is to have large number of transactions. Thus even though the annual current turnover of informal traders was significantly lower implying that it was basically small firms that engaged in

informal trading, the number of trading transactions undertaken annually was much higher for informal traders.

Table 4.3.4-4
Risk Mitigation

	Informal Traders (Percent of Respondents)			
Payments to enforcement agencies(%)	**1-3 %**	**3-6 %**	**6-10%**	**> 10 %**
Bangladesh	28	60	12	0
India	78	18	4	0
Number of annual transactions	**< 20**	**20-40**	**40-80**	**>80**
Bangladesh	18	40	36	6
India	2	26	34	38
Annual turnover (Rs. Lakhs)	**<1.5**	**1.5-12.0**	**12.0- 40.0**	**>40**
Bangladesh	60	20	20	-
India	4	58	22	16

Thus while in Bangladesh 40% of the traders made 20 to 40 transactions annually, in India 38% of the informal respondents made more than 80 transactions in a year.

Information was also sought on the mechanism for dispute settlement among contracting parties. In both Bangladesh and India informal traders approached the informal trading groups to resolve disputes. In several cases traders reported that they depended on their ethnic ties to resolve conflicts.

1.3.5 Transaction Costs

Informal traders incur transaction costs in the form of payments made to enforcement agencies as bribes, transportation costs, cost of credit and cost of currency conversion. Table 4.3.5-1 shows that 50% of the informal traders in Bangladesh had to make payments between 10% and 20% of their turnover in the form of transaction costs while in India 60% of the informal traders had to bear transaction costs of less than 10% of their turnover.

Table 4.3.5-1
Transaction Cost of Informal Traders

	Percent of Informal Traders			
Transaction Cost	**<10%**	**10% - 20%**	**20% - 30%**	**>30%**
Bangladesh	25	50	21	4
India	60	38	2	-

An aspect that needed to be probed into was whether bribes had decreased after liberalisation. Informal traders were asked whether bribes as a proportion of their

total turnover had increased, decreased or remained unchanged in the last five years. Contrary to our expectations, the survey results point out that in Bangladesh 70% of the informal traders and 64% of the Indian traders perceived that there had been an increase in bribes in the last five years (Table 4.3.5-2).

Traders were further asked why payment of bribes to enforcement agencies had increased.[14] A number of explanations were offered by traders. Most of the informal traders said that custom officials in border areas and officials from the Border Security Force see this as an opportunity to raise their personal incomes. Moreover, bribes had become pervasive with links from the border officials through the bureaucracy to the politicians. Yet another reason cited by some traders was the frequent change of officials at the border which meant every new official wanted to maximise his additional income for the duration of his stay in the border area.

Table 4.3.5-2
Liberalisation and Bribes

	Percent of Informal Traders					
	Perception of Indian traders			Perception of Bangladeshi traders		
	Increase	Decrease	No change	Increase	Decrease	No change
Payment of bribes to officials	64	12	24	70	2	28

1.3.6 Financing Informal Trade

Intrinsic to the activity of informal trading is the issue of financing such activities. If goods are being traded across borders, then the transaction is complete only when payments are made for the goods received. Respondents were asked about the sources of finance with the option of ticking more than one option in case they used more than one source of finance.

It can be seen from Table 4.3.6-1 that all respondents in both Bangladesh or India rely at least to some extent on their own resources for financing trading activities. When traders were asked what proportion of their finances were own-financed, 46% of the traders in Bangladesh and 50% in India said that they financed 80% to 100% of their finances from their own funds (not shown in Tables). In both countries traders usually supplement their financial needs through borrowings from friends, relatives, and informal money lenders. In Table 4.3.6-1 it can be seen that in Bangladesh 50% of the traders borrowed from friends and relatives while 52% borrowed from informal money lenders. In India fewer proportion of respondents depended on these two sources. While 29% of

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[14]   This was an open-ended question to elicit informal traders' perceptions.

the respondents borrowed from friends and relatives, 37% borrowed from informal money lenders. Note that in the Bangladesh territory, 18% of the respondents borrowed from formal banks. Further, it was found that all such respondents were selling in the domestic market, which might have helped them to borrow from official banks.[15]

Table 4.3.6-1
Source of Finance for Informal trade

	Percent of Respondents	
	Bangladeshi traders	Indian traders
Friends and relatives	50	29
Informal money lenders	52	37
Banks	18	0
Own finance	100	100

Note: Respondents were asked to mention their sources of finance with the option of ticking more than one option. The numbers are percent of respondents

If informal traders rely on informal sources of finance, what kind of transacting environment exists in the informal financial market? When traders were asked whether they had any contact with the lender outside of loan transactions, an overwhelming 92% of them in Bangladesh, and 71% in India said they had some contact with the lender (see Table 4.3.6-2). When traders were asked whether they knew the source personally prior to the first loan transaction, 33% of the respondents taking loans in Bangladesh and 93% in India answered in the affirmative. Moreover, when respondents were asked whether the lenders were aware of the purpose of the loans, 50% and 95% of the respondents in Bangladesh and India respectively gave positive responses. All these factors point to the evidence of non-anonymous transacting environment which is an important risk reduction strategy. Thus non-anonymity in both trading and financing of informal trade is crucial to the smooth functioning of informal trading markets.

Table 4.3.6-2
Information on Loan Transactions of Informal Traders

	Percent of Respondents in	
	Bangladesh	India
Contact with lender	92%	71%
Knew source personally	33%	93%
Purpose of loan known to lender	50%	95%

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[15] It should be mentioned that banks as policy in India and Bangladesh usually do not lend for domestic trading activities.

Information was sought on the mode of financing informal trade. A feature that was revealed in the survey was that traders in Bangladesh as well as in India made payments mostly in Bangladesh currency (see Table 4.3.6-3).[16]

While in India all respondents claimed that at least some part of the payments were accepted in the Bangladeshi currency, in Bangladesh 76% of the respondents said they made at least some proportion of their payments in Bangladeshi currency.[17] The survey also revealed that barter, gold, silver and the US$ were hardly used to finance informal trade.

Table 4.3.6-3
Mode of Financing

	Percent of Respondents	
	Bangladeshi Traders	**Indian Traders**
Barter	0	10
Silver	0	0
Gold	0	14
Indian Currency	56	49
Bangladesh Currency	76	100
US $	0	0
'Hawala'	22	0

Note: Respondents were asked how they financed informal trade with the choice of giving more than one option.

Another aspect that was highlighted in the course of the survey was the use of 'hawala' for financing informal trade. Eighteen percent of the informal traders in Bangladesh reported using the 'hawala' for making payments (see Table 4.3.6-3).[18] These traders clearly relied a great deal (60% to 100%) on the 'hawala' for making payments. The uniqueness of this system is that there is no physical transfer of currency. This mechanism, referred to as the 'hawala' in India and the 'hundi' in Bangladesh, operates on the same principles. Thus an Indian exporter, who exports goods to Bangladesh, gets his payment through the 'hawala'. The dealer in Bangladesh sends an 'I owe you' to the dealer in India and the requisite equivalent amount (in accordance with the black market exchange rate) is paid to the exporter. The 'I owe you' is analogous to cash cheque under the modern

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[16] This is true independent of the nature of transactions, i.e. export/import from India or Bangladesh.

[17] When traders were asked what proportion of informal trade was fnanced through Bangladeshi currency, 72% of the respondents in India and 52% of the respondents in Bangladesh claimed they financed 60% to 100% of their trade in this currency.

[18] In fact the ''hawala'or the 'hundi' is so efficient that payments can be made on the same day.

banking system.[19] Our discussion with traders reveals that the moneylenders have well-developed networks and they can provide large capital at short notice. Since the use of Bangladeshi currency was found to be the most important currency in which informal trade was being carried out, further information on this aspect was sought from the informal traders. When respondents in India were asked about what proportion of partner currency was changed to local currency, 84% of the Indian traders claimed that they changed 100% of the Bangladesh currency to local currency while the rest of them said they converted at least 50% of the foreign currency to local currency. [20] With regard to way of converting partner country currency to local currency, our findings emphasised the role of informal money lenders who were used by informal traders for converting currencies. What does get established from the survey is that the Bangladeshi currency comes to India through the informal capital market.

Perhaps what lies at the crux of the entire informal trading is the issue of balance of payments. Clearly there is a one-way informal trade between India and Bangladesh and there should be evidence of financing the trade deficit in informal trade. In the course of the survey, it was found that a significant proportion of it is financed through remittances of the Bangladeshi migrants, legal or illegal, residing in India. Illegal migrants do not have access to the formal channel for remitting earnings, and so they rely on the informal financial market for remittances. Some of the legal migrants also use the informal channel for remittances as this channel is faster than the official channel. In fact, the informal traders commented that the informal capital market is so efficient that it can remit the money to Bangladesh on the same day. While proper estimates of the number of migrants residing in India is not available, according to one study, during 1972-1993, a total number of 4.1 million people arrived in India from Bangladesh. Out of that a total of 0.8 million overstayed (difference between the immigration and emigration figures).[21] This however only represents the number of illegal migrants who have made an entry officially. The actual number of illegal migrants could be substantially higher. According to estimate quoted officially, there are about 10 million illegal Bangladeshi migrants in India.[22] Clearly, then remittances of Bangladeshi workers in India are being used to settle the imbalance in informal trade.[23] However, there would still be some unexplained

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[19] Sarvananthan(1999) has reported existence of similar arrangement for financing Indo-Sri Lanka informal trade.

[20] Since the survey captures mostly movement of goods from India to Bangladesh, payments would be received primarily by Indian traders.

[21] See Banerjee *et. al*. 1999.

[22] See Parliament Proceedings, 1998/99.

[23] The informal trade deficit according to Chaudhuray (1995) is Rs. 12.2 billions. If there are 10 millios illegal migrants and each remits about Rs.1000, a total remittance of Rs. 10.0 billions can be explained.

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deficit that could be attributed to other factors like drugs, arms and narcotics, which is beyond the scope of this study.[24]

1.3.7 Why Informal Trade takes place

Informal traders were asked to tick factors that they considered important for encouraging informal trade. The factors were related to three broad categories: (i) those that were related to the policy environment, (ii) institutional factors, and (iii) non-economic factors. The survey revealed that institutional factors were the most important factors encouraging informal trade between India and Bangladesh. The top four factors (viz, quick realization of payments, no paper work, no procedural delays and lower transportation costs) in Bangladesh or India are found to be factors giving rise to transaction costs (see Table 4.3.7-1). The inadequate transport systems that have been in existence between India and Bangladesh have led to high transportation costs. With respect to transit modalities, the survey has identified following bottlenecks: port congestion, excessive documentation, delays, slow movement of goods, transhipment and other indirect costs.[25] While in India ethnic ties ranked fifth in importance, the presence of high duties in the official channel ranked fifth in Bangladesh. The fact that informal traders have a low level of education in both India and Bangladesh may also be a deterrent for using the formal channel. The administrative formalities of the formal channel not only involve a cost but also a demand a basic level of education. Informal traders are obviously not equipped to handle the difficulties of the formal channel.

It should be noted that third country goods does not appear to be a major factor influencing informal trade from Bangladesh to India. This is contrary to Chaudhary (1995) where it was indicated that this is the most important factor influencing informal trade flows from Bangladesh.

Perhaps what does get highlighted from the survey is that trade policy barriers like tariffs and quantitative restrictions were not considered as important as institutional factors. Also, trade policy barriers were considered relatively more important in Bangladesh than in India (see Table 4.3.7-1).

Since perceptions on factors influencing informal trade were sought from Bangladeshi as well as Indian traders, a Spearman's rank correlation was

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[24]   An attempt was also made to examine whether mis-invoicing of trade can finance informal trade. Given the significant year to year variation in degree and direction of mis-invoicing no firm conclusion could be drawn.

[25]   Trucks have to wait often at the border for 8-10 days before documents are endorsed and checked at the customs. The transit authorities at Petrpole-Bongaon border point remain closed three days in a week resulting in no trade on these three days. Corruption is rampant at all checkpoints in border areas. Hefty bribes have to be paid to transship trucks across the border.

computed for the ranking of factors given by both kinds of respondents. It shows a high value of 0.77 indicating converging of views regarding the factors influencing informal trade. Formal traders in Bangladesh and India were also asked to give their perceptions on the factors that they considered important for informal trade. A Spearman's rank correlation for perception of factors between formal and informal traders in Bangladesh yields a high value of 0.75. The same for the Indian traders yields a value of 0.76. In other words, there is high degree of agreement among the traders regarding the relative importance of various factors.

Table 4.3.7-1
Reasons for Informal Trade

Factors Influencing Informal trade	Percent of Respondents	
	Bangladesh	**India**
Presence of high duties in official channel	50	18
Quantitative restrictions	34	22
Imported from third country into Bangladesh	18	6
Leakage of administered price goods	12	14
Absence/shortage of storage/warehousing facilities	24	6
Produced locally across border	40	22
Presence of haats/bazaar	22	20
Lower transportation cost	72	50
Lower time to reach destination for perishable commodities	36	42
Lower time to reach destination for non-perishable commodities	28	30
Absence of trading routes	0	10
No procedural delays	52	82
No paperwork	76	92
Quick realisation of payments	88	94
Lower bribes	26	38
Nexus between enforcement agencies and traders	46	30
Ethnic ties	24	42

Note: Respondents had the option of ticking more than one factor.

Transacting Environment of Formal Traders

Exporting through official channel consists of several steps starting with obtaining import-export licenses, imports for exports etc, quality control certification, and ending with receiving export remittances through bank. Importing legally is by no mean simple as it also involves several steps such as obtaining import licenses, letter of credit authorisation form, availability of finance, clearance from custom, etc. All these procedural complexities give rise to costs to exporters, which are not directly related with the production process. Following Coase (1960) terminology, we have called these as transaction costs, which exporters or

importers incur in terms of time constraint and/or in the form of money resources they spend in the process.

As noted earlier, the transaction cost in trading arises due to the procedural complexities. To be specific, they may originate due to one or several of the following factors: (a) multiplicity of rules and regulation; (b) stringent but inefficient implementation processes; (c) infrastructural bottlenecks in transportation, communication; (d) absence of information transparency; (e) bureaucratic approach of public agents; and (f) institutional factors which intensify rent-seeking activities by the officials at various stages. An earlier study on estimation of transaction cost in the Indian context has pointed out that the rent seeking activities of the public agents are omnipresent at the different stages of export transactions (see Exim Bank, 1999). How high is the transaction cost in India relative to that of Bangladesh? We have used information from our survey data to quantify the transaction cost of formal trading activities in Bangladesh and India in terms of additional time required and the amount of bribes that the trader has to pay to avoid unlawful harassment or procedural delays.

The export-import policy documents of India and Bangladesh are scanned to understand the nature and magnitude of procedural complexities at different stages of export/import transactions. Since trade regulations are not the same in both the countries, we have decided to compare the sources of transaction cost at the following steps that are common to most trade transactions:
obtaining different licenses
obtaining various refunds
problem associated with custom authorities
problem relating to banks
problem associated with transportation of goods

Tables 4.4.1-1 to 4.4.1-3 summarises our findings on transaction cost in India and Bangladesh. Table 4.4-1 indicates that Bangladeshi traders face more problems (and thereby positive transaction cost) than the Indian traders from their respective authorities with regard to licensing, refunds and custom dealings. By contrast, the Indian traders face more problems (thereby positive transaction cost) with banks and transportation.

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Table 4.4-1
Incidence of transaction cost

Problem faced by the traders at the following steps of transactions	Incidence of transaction cost faced by Indian traders		Incidence of transaction cost faced by Bangladesh traders	
	No of respond-ents	% of traders indicating positive cost	No of respond-ents	% of traders indicating positive cost
Licenses	50	86	45	93
Refunds	50	80	29	90
Custom	50	36	46	55
Banks	50	84	46	68
Transportation	50	88	45	67

Table 4.4-2 depicts the break-up of the additional time taken at different steps of transactions. The additional time taken is estimated for our case as the difference between the actual time taken and the trader's perception about the time that should be required at these stages. The table indicates that Indian traders in comparison to Bangladesh traders faced higher transaction cost (in terms of additional time required) at each of the steps of transactions under analysis from the respective authorities.

Information was also collected from the traders in India/Bangladesh regarding the relative importance (in order of payments as bribes) of various components of transaction costs. For the Bangladesh traders, the top three components of transaction cost (in order of decreasing cost) are license, custom, and banks. By contrast, the traders on the Indian side have identified the top three components of transaction cost as transportation, bank, and license.

Table 4.4-2
Profile of Additional Time Required

Additional time required at the following steps of transactions	% of Indian traders reporting additional time required (in days)			% of Bangladeshi traders reporting additional time required (in days)		
	1-10	11-19	> 20	1-10	11-19	> 20
Licenses	21	37	42	67	24	9
Refunds	40	35	25	24	27	49
Custom	100			100		
Banks	74	14	12	100		
Transportation	96	4		100		

What is the magnitude of combined transaction cost in the form of payments to officials as bribes at various stages, transportation cost including insurance cost, and cost of credit as share of their turnover? The relevant data are tabulated in Table 4.4-3. As this table shows, the combined transaction cost under these heads is by and large lower in India than in Bangladesh.

Table 4.4-3
Magnitude of Transaction cost

Transaction cost as percent of their turnover in the range of	Percent of Respondents (traders) in India	Percent of Respondent (traders) in Bangladesh
Less than 10%	24	22
10% to 20%	40	
20% to 30%	36	20
More than 30%		58

Note: Transaction cost here includes payment as bribes to officials at various stages plus transportation cost including insurance cost plus cost of credit.

Our survey indicated that out of the total transaction cost, total payments to officials as bribes usually lie between 1% to 5% in either country. The respondents indicated that the total bribes never crossed 10%.

An interesting feature that emerged was that formal traders preferred not to take recourse to law when faced by any kind of risk even though by definition formal traders can approach the courts in such a situation.[26] Given the weak judiciary, formal traders preferred to settle the dispute mutually or approached traders/business associations for settlement of dispute. We find that a number of respondents in Bangladesh/ India made use of their ethnic ties to solve disputes. This implies how formal traders are actually using mechanisms of informal trading to circumvent institutional barriers to trade.

With liberalisation, it is expected that procedural complexities will be simplified leading to decline in rent-seeking activities of government officials. In this context, information was sought from traders on whether their magnitude of payment on account of bribes to officials had increased, decreased or remained unchanged in the last five years. Contrary to our expectation it was found that only 10% of the respondents in India and 7% in Bangladesh indicated that bribes had fallen in the last five years (see Table 4.4-4). Further, while 67% of the respondents in India said that there was no change in the level of bribes paid to officials in the formal channel, in Bangladesh 59% of the traders said that bribes had increased in the last five years. Of course, inflation is one of the reasons for the bribes to increase over time. But, that is not the only reason. The traders have indicated that the corruption had become pervasive over time. Earlier, only officials at the lower level of government used to take bribes. Nowadays, even officials at the higher level along with politicians are demanding bribes. In fact, the traders opined that with spread of education, the people had become less God fearing and therefore do not hesitate to take bribes.

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[26] The various kinds of risks are shown in Table 4.3.4-1).

Table 4.4-4
Liberalisation and Bribes

	Perception of Indian traders			Perception of Bangladeshi traders		
	Incre-ase	Decrea-se	No chan-ge	Increa-se	Decrea-se	No change
Payment of bribes to official	24	10	66	59	7	34

Note: The numbers signify percent of respondents.

Discriminating Characteristics of Formal and Informal Traders

The empirical analysis in the previous section has examined several characteristics of formal and informal traders in India and Bangladesh as well as important aspects of modality and behaviour of such trade. While the analysis has suggested differences between formal and informal traders/trade in many respects, these needs to be evaluated by some statistical criteria to draw conclusive evidence on differences between the two types of traders/trade. The significance of the differences between the two types of traders/trade is first evaluated in terms of a univariate statistical criterion. The parameters identified by the univariate test as important in differentiating the two groups are then simultaneously included in a multivariate test to control for possible mutual interaction.

4.5.1 Univariate Analysis of Differences

The univariate test applied here is non-parametric. The advantage of using a non-parametric test is that it does not assume any specific distribution of the population under analysis. This is just right for us since we have very little knowledge of the population (i.e. informal traders). The test that we plan to use is Wilcoxon signed-rank test. Among the various non-parametric tests, it is one of the most powerful ones as it utilises information on both the direction and magnitude of the differences within pairs. It gives more weight to a pair that shows a large difference than to a pair that shows a smaller difference.

The results of the univariate statistical tests in terms of twenty-five parameters governing different aspects of trader/trade are depicted in Table 4.5.1-1. As this table indicates, the tests have been carried out separately for the characteristics of Indian traders and Bangladeshi traders. The data-base for our test on Indian side is fifty pairs of traders while on the Bangladesh side, we have forty-six pairs of observations. The signed-rank test can be, as usual, either one- or two-tailed. In our analysis, the tests are first conducted using two-tailed test. If the test indicates significance difference in an attribute between the formal and informal traders, one- tailed test is again done to check the direction of the difference.

Recent literature on international trade has highlighted the importance of ethnic linkage in trade (Rauch & Trindade, 1999). It has also been argued in Taneja (1999) that ethnic ties/family linkages play a dominant role in aiding/abetting informal trade. The test using data on Indian traders indicate informal traders show significantly more ethnic linkages than the formal ones. However, our data base on Bangladeshi traders fails to bring out any significant differences in ethnic linkage.

Are perishable commodities traded more through the informal channel than the formal one? Our evidence indicates that perishable commodities are traded more through the formal channel. This may occur due to the fact that goods are sourced primarily from other states in India.

Do informal traders show low education, implying less access into formal channels of trading? Here our null hypothesis is whether there are no significant differences between their education levels. The result of the test indeed proves our a priori prediction both for Indian and Bangladeshi traders.

Expectedly, familiarity with the trade policy documents of both countries is a must if one has to indulge in official trade. Thus, apart from being educated, a trader needs to have a degree of awareness regarding it. We have attempted to judge this by the indicator variable *awareness of SAFTA*. The direction of differences suggests that that awareness of SAFTA is more among the formal traders than their informal counterparts.

The attribute *education & awareness of SAFTA* basically capture the combined score on account of education level and awareness of SAFTA. As expected, it has higher value for formal traders.

To minimise risk of goods being seized, it is reasonable to assume that the informal trader would send goods across the border in small consignments and thereby requiring more number of transactions than formal one. The statistical test does support our prediction.

Table 4.5.1-1
Results of Wilcoxon's Signed-ranked test

Sl. No.	Parameter	Bangladesh Territory		Indian Territory	
		Z statistics	Inference	Z statistics	Inference
1.	Ethnic ties (Ethnic)	-0.63	Accept null	-3.67	Fo<If
2.	Perishable commodities (Perish)	2.12	Fo>If	5.20	Fo>If
3.	Education level (Edu)	5.84	Fo>If	5.91	Fo>If
4.	Awareness of SAFTA (SAFTA)	4.38	Fo>If	5.75	Fo>If
5.	Education & awareness of SAFTA (EduSaf)	5.81	Fo>If	6.03	Fo>If
6.	Number of transactions (Tran #)	-2.37	Fo<If	-2.56	Fo<If
7.	Number of commodities traded (Com #)	1.24	Accept null	-1.75	Fo<If
8.	Trading in same commodities (Same)	2.54	Fo>If	-0.98	Accept null
9.	Time taken for first trade deal (TimFr)	1.68	Fo>If	2.14	Fo>If
10.	Time taken for subsequent trade deals (TimSq	5.55	Fo>If	6.15	Fo>If
11.	Presence in domestic market (PreDom)	2.79	Fo>If	2.98	Fo>If
12.	Turnover	5.74	Fo>If	5.03	Fo>If
13.	Profit	-5.48	Fo<If	-0.68	Accept null
14.	Border price differential (BorPr)	-4.46	Fo<If	0.66	Accept null
15.	Rate of entry/exit (Ent/Ex)	1.57	Accept null	0.16	Accept null
16.	Trading Period (TrdPrd)	0.83	Accept null	1.22	Accept null
17.	Margin fluctuation (MarFl)	-2.24	Fo<If	-1.80	Fo<If
18.	Transaction Cost (TC)	4.84	Fo>If	3.27	Fo>If
19.	Own finance (OwnFin)	-4.01	Fo<If	-3.30	Fo<If
20.	Finance from friends/relatives (FinFrRel)	-0.51	Accept null	-1.76	Fo<If
21.	Interest rate (Int)	0.73	Accept null	-1.22	Accept null
22.	Goods not conforming to specification (Risk1)	-0.07	Accept null	-2.50	Fo<If
23.	Incidence of default in delivery (Risk2)	-3.04	Fo<If	-0.21	Accept null
24.	Incidence of delay in delivery (Risk3)	-1.50	Fo<If	-6.64	Fo<If
25.	Risk	-1.94	Fo<If	-5.07	Fo<If

Note: Fo pertains to formal while If pertains to informal. All the tests have been carried out at 5 % level of significance

It has been argued by Chaudhari (1995) that because of the poor transport networks and storage facilities, informal trader plays a role to narrow down the short-term demand/supply gap in the border region. If that is so, the informal trader relative to formal counterpart should not carry out transaction in the same commodity over time. Moreover, the same should indulge in trading more commodities depending on the demand/supply condition. The results of the test partially support our hypothesis. The informal traders in India do deal in more number of commodities than the formal one. However, we do not find the same evidence for the informal traders in Bangladesh. Instead, formal Bangladeshi traders show significantly less trading in different commodities over time than the informal counterpart. For the Indian traders, our test does not find any statistically significant differences in this attribute.

How well the information channel of informal trading arrangement is developed is judged by the following two attributes: (a) *time taken for first trade deal* and (b) *time taken for subsequent trade deal.* The result shows that on both these counts, informal trading arrangement in India as well as Bangladesh function better than their formal counterpart.

The co-existence of trading in the domestic market with informal trading has been argued by Chaudhari (1995). Is it the typical behaviour of only informal traders? On the contrary, our result indicates that formal traders exhibit larger presence in domestic market.

Is the informal trade characterised by large number of agents, each having low turnover? Our survey does not provide any information regarding the relative size of the agents operating in the two markets. However, we have used data on the size of the trading firms in the two samples (formal and informal traders) to test whether the formal traders have significantly larger size. We do find that formal traders operate at a bigger scale than the informal one.

Maximisation of profits is the objective function at individual level in any trading activities. Naturally, one ponders whether there is significant difference between the profit margins in the two channels. The test on differences in profit margin of Bangladesh traders between the two channels is rejected in favour of the alternative hypothesis of higher profit margin in the informal traders. However for Indian traders, we could not find any significant differences.

Expectedly, the border price differential is the driving force for sustaining informal/formal trade activities. In this connection, one may question whether traders prefer one channel to another depending on the border price differential. Our result partially supports the hypothesis in the sense that higher border price differential prevails for trading through formal channel in the Bangladeshi traders. Is the informal trading characterised by higher rate of entry and exit than the formal counterpart? In other words, is the formal trader typically in business over

a longer period than the formal one? The statistical test on both these counts fails to identify any differences.

If the informal traders function because of short-term demand/supply gap, and they shift their commodities from time to time, their margin should exhibit higher fluctuation than the formal one depending on the demand/supply situation. Indeed, the test shows that the fluctuation of margin is more for the informal trader.

The earlier section has emphasised the role of transaction cost in trade. Naturally, one ponders whether informal trade flourishes because of lower transaction cost. The direction of differences on transaction cost suggests that transaction cost in formal in India as well as in Bangladesh is significantly higher than the informal counterpart.[27]

The next two parameters of analysis look at the financing part of formal and informal traders. We have earlier found the evidence that informal traders have a smaller size of turnover. Being quasi-legal in nature, informal traders do not have access to finance from legal financial institution under this head. How do they meet their financing need? Do they use their own finance or use finance from their friends and relatives for carrying out business? Inference from the test is that own finance plays a larger role in informal trade than the formal counterpart. However, the picture on the share of finance from friend and relative is mixed: only for Indian traders, we find significant differences in the share of finance from friend and relative between formal and informal traders.

If a trader needs to borrow, the formal one has access to legal banking sector while the informal counter has access only to informal banking sector.[28] The later market usually carries a higher interest rate. However, the analysis fails to bring out any significant differences in the interest rate between the two types of traders.

The next three attributes relate to the different kinds of risk that a trader, informal as well as formal, faces in carrying out their transaction. The statistical evidence indicates that informal trade, by and large, carries a higher risk. The parameter *risk* is constructed to capture the combined risk on these three accounts. The

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[27] To conduct the test, we have defined transaction cost as those, which are not directly related to the production process. This implies that for the formal trade, it is estimated as payments to officials at various stages plus transportation cost including insurance plus cost of credit. In case of informal trade, it is estimated as sum of payments to enforcement agencies, transportation cost including porter/courier charges, cost of credit and cost of currency conversion.

[28] Of course, the possibility is always there that an informal trader borrows from banking sector under different purpose and uses the loan for informal trading. This is feasible if the informal trader also trade in domestic market.

signed-rank test again indicates that informal trade has significantly higher risk than the formal counterpart.

4.5.2 Multivariate Analysis

The factors identified by the univariate tests as important in differentiating the two groups are then simultaneously included in a multivariate test to control for possible mutual interaction. Our preferred choice of multivariate technique is discriminant analysis. The discriminant analysis involves the fitting of linear discriminant score function on the basis of observed data on a number of discriminating variables of individuals whose group membership is known. These functions (sometimes known as classification functions) can classify further cases into the groups on the basis of values of discriminating variables. In our case, discriminant analysis can be used to examine whether informal traders differ from formal, and if so, in terms of which characteristics.

The discriminant score functions estimated are of the form:

$$Y_i = \beta_{io} + \beta_{i1} X_{i1} + \ldots + \beta_{in} X_{in} \qquad (1)$$

Where Y_i is the discriminant score for i = formal trade or informal trader; X_{ij} is the jth discriminating variable (for j = 1 to n); and β_{ij} is a coefficient.

An individual observation is classified into the groups for which the discriminant score on the basis of its observed values is higher. The goodness of fit is judged in terms of significance of mean difference between groups, which can be expressed as F-ratio, and the ability of the fitted discriminant functions in correctly classifying the individual cases.

The discriminant analysis has three major assumptions. First, no variable may be a linear combination of other discriminating variable. Second, the population co-variance matrices are similar for each group. Third, each group is drawn from a population, which has a multivariate normal distribution. It has been shown, however, that discriminant analysis is a rather robust technique and can tolerate some deviation from these assumptions (Klecka 1980; Jackson 1983).

The practical consideration however demands that too many variables may not prove to be good discriminators. Therefore, a step-wise procedure to select the significant discriminators was adopted. The procedure begins by selecting the individual variable that provides the greatest univariate discrimination (in terms of groups mean difference or partial F-ratio or F to enter). It then pairs the first variable with each of the remaining variables to locate the combination, which produces the greatest discrimination. The variable, which contributed to the best pair, is selected. In the third step, the procedure goes on to combine the first two with each of the remaining variables to form triplets. The best triplet determines the third variable to be entered, and so on.

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Below, the multivariate analysis is carried out on Bangladeshi traders followed by on Indian traders.

Discriminant Analysis of Bangladeshi traders

The univariate analysis of statistical significance of differences of Bangladeshi traders has identified 18 attributes. Since discriminant analysis demands that none of discriminating variables should have high correlation with other variables, one needs to drop several of the variables. Our multivariate analysis begins with the following nine variables, namely turnover, fluctuation of margin, nature of commodity (perishable or non-perishable), own finance, number of transactions, transaction cost, presence in domestic market, risk and education plus awareness of SAFTA.[29]

Table 4.5.2-1 presents "within group correlation matrix" on all 9 possible discriminating variables included in our analysis. It can be seen from the table that none of the variables have high correlation. Thus, the assumption of the discriminant analysis that none of the possible discriminating variables have high correlation holds true.[30]

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[29] The combined attribute *risk* is expectedly correlated with incidence of default or delay in delivery. The later two variables are also correlated with each other. So, we have dropped the two other two parameters. The variables, awareness of SAFTA and education level, are correlated with each other. So, we include the combined variable education level & awareness of SAFTA. Profit, border price differential, trading in same commodities are found to be correlated with each other and with transaction cost, turnover and hence are excluded. The time required for first/subsequent trade deals are dropped to include the parameter transaction cost since the late incorporates the former two variables.

[30] See Table 4.5.1-1 for explanation on the notations of the variables.

Table 4.5.2-1
Within groups correlation matrix

	Turnover	MarFl	Perish	OwnFin	Tran #	TC	PreDom	Risk	EduSaf
Turnover	1								
MarFl	-0.2657	1							
Perish	0.0754	-0.1219	1						
OwnFin	0.0093	0.1218	-0.1358	1					
Tran #	-0.3639	0.2722	-0.2329	0.0849	1				
TC	-0.2727	-0.0653	-0.035	0.0374	0.107	1			
PreDom	0.2117	-0.3349	0.1754	0.0346	-0.1834	0.236	1		
Risk	0.1826	-0.2892	0.2393	-0.0873	-0.3538	-0.2625	0.3081	1	
EduSaf	0.3702	-0.2349	0.1126	-0.0062	-0.2477	0.2395	0.1746	-0.1673	1

Table 4.5.2-2 provides the summary of the step-wise procedure and variables selected with their relative contribution to the discrimination in terms of their partial F-ratio (F to enter or remove). The procedure selects only 5 of the 9 variables to be significant discriminants, namely turnover, nature of commodity (perishable/non-perishable), transaction costs, risk, and education plus awareness of SAFTA.

Table 4.5.2-2
Summary of step-wise procedure of Discriminant Analysis*

Steps	Discriminating variables	F to enter/ remove	Degrees of Freedom	Decision
2.	EduSaf, Turnover	4.12	F(1,89)	Reject
	EduSaf, MarFl	1.09	F(1,89)	Accept
	EduSaf, Perish	5.11	F(1,89)	Reject
	EduSaf, OwnFin	0.54	F(1,89)	Accept
	EduSaf, Tran #	0.54	F(1,89)	Accept
	EduSaf, TC	35.60	F(1,89)	Reject
	EduSaf, PreDom	4.32	F(1,89)	Reject
	EduSaf, Risk	8.86	F(1,89)	Reject
3.	EduSaf, TC, Turnover	38.99	F(1,88)	Reject
	EduSaf, TC, MarFl	1.51	F(1,88)	Accept
	EduSaf, TC, Perish	9.93	F(1,88)	Reject
	EduSaf, TC, OwnFin	1.26	F(1,88)	Accept
	EduSaf, TC, Tran #	4.43	F(1,88)	Reject
	EduSaf, TC, PreDom	4.98	F(1,88)	Reject
	EduSaf, TC, Risk	0.00	F(1,88)	Accept
4.	EduSaf, TC, Turnover, MarFl	0.00	F(1,87)	Accept
	EduSaf, TC, Turnover, Perish	13.95	F(1,87)	Reject
	EduSaf, TC, Turnover, Own Fin	2.18	F(1,87)	Accept
	EduSaf, TC, Turnover, Tran #	0.71	F(1,87)	Accept
	EduSaf, TC, Turnover, PreDom	0.71	F(1,87)	Accept
	EduSaf, TC, Turnover, Risk	0.71	F(1,87)	Accept
5.	EduSaf, TC, Turnover, Perish, MarFl	0.00	F(1,88)	Accept
	EduSaf, TC, Turnover, Perish, OwnFin	1.65	F(1,88)	Accept
	EduSaf, TC, Turnover, Perish, Tran #	0.00	F(1,88)	Accept
	EduSaf,TC, Turnover, Perish, PreDom	0.41	F(1,88)	Accept
	EduSaf, TC, Turnover, Perish, Risk	4.26	F(1,88)	Reject
6.	EduSaf, TC, Turnover, Perish, Risk, MarFl	0.42	F(1,87)	Accept
	EduSaf,TC, Turnover, Perish, Risk, OwnFin	1.72	F(1,87)	Accept
	EduSaf, TC, Turnover, Perish, Risk, Tran #	0.85	F(1,87)	Accept
	EduSaf, TC, Turnover, Perish, Risk, PreDom	1.72	F(1,87)	Accept

*Steps from 2 onwards are shown. The tests are done at 5% level of significance.

The remaining ones are not significant in the multivariate context. These variables might be good discriminators on their own, but they do not add to the discriminating information contributed by the significant variables. Hence their unique contributions to the analysis are inadequate.

It can be seen from Table 4.5.2-3 that our discriminant functions are able to classify correctly nearly 100 per cent of the formal respondents and 98 per cent of the informal respondents. So, they appear to be good fit.

Table 4.5.2-3
Classification matrix

Actual group	Classification		Total	Percentage of cases correctly specified
	Formal trader	**Informal trader**		
Formal trader	46	0	46	100.00
Informal trader	1	45	46	98.00

Dicriminant Analysis of Indian traders

The univariate analysis of characteristics of Indian traders has identified 18 factors. However, we drop the following six parameters--own finance, the combined risk element, incidence of delay in delivery, time taken for subsequent trade deal, education and awareness of SAFTA-- to ensure that none of the discriminating variable are correlated with each other.[31] The `within group correlation matrix' on all the potential discriminating variables is shown below in Table 4.5.2-4. Note that none of them have correlation more than 0.4.

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[31] EduSaf is included instead of education and SAFTA as the later two are correlated with each other. The parameter time taken for subsequent trade deal is found to be correlated with many other attributes such as EduSaf, Turnoever, TC and Risk3. It is so because it is a attribute representing effect and so we have decided to drop it. Risk and Risk3 are found to be correlated with each other and with EduSaf, Risk1. So, they are omitted to include Risk1. OwnFin is also omitted as it has high correlation with Turnover, Perish, and TC.

Table 4.5.2-4
Correlation matrix of Potential Discriminating variables

	Ethnic	Turnover	MarFl	TC	FinFrRel	Com #	Tran #	EduSaf	TimFr	PreDom	Risk1	Perish
Ethnic	1											
Turnover	0.193	1										
MarFl	-0.122	-0.214	1									
TC	-0.096	-0.101	0.240	1								
FinFrRel	-0.115	-0.106	0.163	-0.040	1							
Com #	-0.082	-0.201	0.116	0.226	-0.053	1						
Tran #	-0.250	-0.196	0.185	0.275	-0.118	0.273	1					
EduSaf	-0.193	0.088	-0.109	-0.077	-0.013	-0.068	0.002	1				
TimFr	-0.144	0.034	0.125	-0.082	0.264	0.038	-0.084	-0.031	1			
PreDom	-0.126	-0.142	0.183	0.057	-0.097	0.328	0.389	0.075	0.162	1		
Risk1	0.011	-0.03	-0.240	0.231	-0.078	-0.098	-0.101	-0.060	-0.154	0.006	1	
Perish	-0.123	-0.039	0.309	0.177	-0.017	-0.220	-0.204	0.101	-0.028	-0.254	-0.052	1

The following table shows the step-wise procedure and variables selected in the discriminant analysis. Out of the ten potential variables, the procedure select only the following four attributes-- transaction cost, presence in the domestic market, nature of commodity (perishable/non-perishable), and education plus awareness of SAFTA.

It can be seen from Table 4.5.2-6 that our discriminant functions are able to classify correctly nearly 92 per cent of the formal respondents and 90 per cent of the informal respondents. So, they appear to be good fit.

In summary, we may conclude that nature of commodity (perishable/non-perishable), transaction cost, and education level plus familiarity of trade rules stands as important attributes irrespective of the country of origin of the traders.

Table 4.5.2-5
Summary of Discriminant Analysis of India traders*

Steps	Discriminating variables	F to enter/ remove	Degree of Freedom	Decision
2.	Edusaf, Ethnic	2.18	F(1,97)	Accept
	Edusaf, Turnover	1.44	F(1,97)	Accept
	Edusaf, MarFl	0.00	F(1,97)	Accept
	Edusaf, TC	17.00	F(1,97)	Reject
	Edusaf, FinFrRel	1.69	F(1,97)	Accept
	Edusaf, Com #	0.24	F(1,97)	Accept
	Edusaf, Tran #	0.24	F(1,97)	Accept
	Edusaf, TimFr	0.96	F(1,97)	Accept
	Edusaf, PreDom	7.13	F(1,97)	Accept
	Edusaf & Risk1	0.24	F(1,97)	Accept
	Edusaf, Perish	30.16	F(1,97)	Reject
3.	Edusaf, Perish, Ethnic	2.20	F(1,96)	Accept
	Edusaf, Perish, Turnover	0.93	F(1,96)	Accept
	Edusaf, Perish, MarFl	0.00	F(1,96)	Accept
	Edusaf, Perish, TC	9.09	F(1,96)	Reject
	Edusaf, Perish, FinFrRel	1.25	F(1,96)	Accept
	Edusaf, Perish, Com #	0.00	F(1,96)	Accept
	Edusaf, Perish, Tran #	1.25	F(1,96)	Accept
	Edusaf, Perish, TimFr	2.20	F(1,96)	Accept
	Edusaf, Perish, PreDom	11.74	F(1,96)	Reject
	Edusaf, Perish, Risk1	0.93	F(1,96)	Accept
4.	Edusaf, PreDom, Perish, Ethnic	0.69	F(1,95)	Accept
	Edusaf, PreDom, Perish, Turnover	0.00	F(1,95)	Accept
	Edusaf, PreDom, Perish, MarFl	0.69	F(1,95)	Accept
	Edusaf, PreDom, Perish, TC	7.76	F(1,95)	Reject
	Edusaf, PreDom, Perish, FinFrRel	1.39	F(1,95)	Accept
	Edusaf, PreDom, Perish, Com #	1.04	F(1,95)	Accept
	Edusaf, PreDom, Perish, Tran #	0.00	F(1,95)	Accept
	Edusaf, PreDom, Perish, TimFr	2.45	F(1,95)	Accept
	Edusaf, PreDom, Perish, Risk1	1.39	F(1,95)	Accept
5.	Edusaf, PreDom, Perish, TC, Ethnic	0.59	F(1,94)	Accept
	Edusaf, PreDom, Perish, TC, Turnover	0.37	F(1,94)	Accept
	Edusaf, PreDom, Perish, TC, MarFl	0.00	F(1,94)	Accept
	Edusaf, PreDom, Perish, TC, FinFrRel	0.74	F(1,94)	Accept
	Edusaf, PreDom, Perish, TC, Com #	0.37	F(1,94)	Accept
	Edusaf, PreDom, Perish, TC, Tran #	0.77	F(1,94)	Accept
	Edusaf, PreDom, Perish, TC, TimFr	3.17	F(1,94)	Accept
	Edusaf, PreDom, Perish, TC, Risk1	2.63	F(1,94)	Accept

* Steps from 2 onwards are shown. The tests are conducted at 5% level of significance.

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Table 4.5.2-6
Classification matrix

Actual group	Classification		Total	Percentage of cases correctly specified
	Formal trader	Informal trader		
Formal trader	46	4	50	92.00
Informal trader	5	45	50	90.00

Summary of Findings

The survey reveals that informal trade between India and Bangladesh is essentially a one-way trade where goods move from India to Bangladesh.

The survey reveals that in the absence of formal contracts between trading partners, the informal trading arrangements were characterised by non-anonymous transactions in the sense that majority of the respondents in Bangladesh/ India entered into informal trading contracts through friends and relatives.

The mechanism that supports information flows is also very important since what the transacting parties know and do not know will determines systematically the arrangements that will characterise exchange between them. The survey shows that traders relied most on distribution networks, making personal trips and using enforcement agencies for gathering relevant information. Clearly, the distribution network serves a dual purpose of both marketing and information channel.

An aspect crucial in informal trading is the risk associated with informal trading. The survey results indicates that extent in risk (in the form of goods not conforming to specifications, default and delay in delivery of goods, default in payment) in informal trade for any of the above risk attributes is quite low in Bangladesh/India. Further the probability of getting caught due to seizure is very low. Informal traders have developed several mechanisms to mitigate risk. The presence of non-anonymous transacting in both informal trading and financing indicates an important risk reduction strategy. An obvious way of mitigating risk is to make payments to enforcement agencies. Another mechanism developed by informal traders to diversify risk is to have a large number of annual transactions. Our analysis of transacting environment of formal traders in India/Bangladesh indicates that the regime is characterised by a plethora of regulations, absence of information transparency, bureaucratic approach of public agents, infrastructure bottlenecks in transportation, communication, and above all, by rent seeking activities of public servants. All these factors result in additional cost to traders. Our study indicates that such costs are very much a part of the formal trade regime in India as well as in Bangladesh. Moreover, Bangladeshi traders face more problems relative to the Indian traders from their respective authorities with

regard to licensing, refunds and custom dealings whereas the Indian traders face more problems with banks and transportation.

An interesting feature that emerged was that formal traders preferred not to take any recourse to law when faced by any violation of contractual agreement. Given the weak judiciary, traders preferred to settle the dispute mutually, or approach traders/business associations for settlement of dispute or use their ethnic ties (if any) to solve disputes. This implies that formal traders are actually using mechanisms of informal trading to circumvent institutional barriers to trade.

While both institutional arrangements i.e. the formal and informal carry out transactions in goods across borders providing, they are carried out at a cost broadly defined as transaction costs. The hypothesis posed in the study was that traders would opt for the informal channel if transaction costs of operating through informal channel are lower than the formal channel. The survey reveals that the transaction costs in the informal channel are significantly lower than the formal channel.

This aspect was further highlighted when informal traders were asked about why they opted for the informal channel. The survey revealed that institutional factors were the most important factors facilitating informal trade between India and Bangladesh. The top four factors (viz., quick realisation of payments, no paper work, no procedural delays and lower transportation costs) in Bangladesh and India were found to be factors giving rise to transaction costs. Perhaps what does get highlighted from the survey is that trade policy barriers like tariffs and quantitative restrictions were not considered as important as institutional factors. Another reason for the preference of informal channel could be the lower level of education and lack of awareness of trade rules among the informal traders.

The survey reveals that a large proportion of goods traded from India to Bangladesh are procured from other states in India. This shows that informal trade is at least as organised as formal trade, if not better organised than formal trade. Also, we find that there is evidence of leakage of PDS goods (in the form of informal trade) from India to Bangladesh.

An aspect that needed to be probed into was whether goods moving from Bangladesh to India were of third country origin. According to the perception of the traders, this factor was not considered important for informal trade indicating that the difference in tariff levels in the two countries is not large enough for traders to find it profitable to trade in goods originating in a third country.

It is expected that trade liberalisation will simplify procedural complexities leading to decline in rent-seeking activities of officials. On the contrary, we find that the bribes have increased in the last five years in both the formal and informal traders. The traders have noted that corruption has become pervasive over time.

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Earlier, only officials at the lower level of government took bribes. Nowadays, even officials at the higher level along with politicians are demanding bribes.

The common attributes between formal and informal traders were analysed in a comprehensive manner by univariate and multivariate statistical criteria. Our choice of multivariate technique is step-wise discriminant analysis. It is used to examine whether informal traders differ from formal, and if so, in terms of which characteristics. The findings of the discriminant analysis for Bangladeshi and Indian traders indicate that the nature of commodity, transaction cost, and education level plus familiarity of trade rules stand as important factors irrespective of the country of origin of the trader.

Our study does not find that trade policy distortions are the driving force behind the vibrant informal trade. This probably suggests that informal trade will co-exist with formal trade even if a free trade region is formed in future in South Asia.

Incidentally, when informal traders were asked regarding the future of informal trade in view of the progressive removal of trade barriers under SAPTA, 38 out of 50 informal traders in India and 41 out of 50 informal traders in Bangladesh responded that informal trade will increase in future.

Case Study of India-Nepal Informal Trade

This section makes an attempt to analyse the India-Nepal informal trade both in terms of its raison d'etre as well as the institutional aspects of its functioning. Since the study is primarily based on the survey conducted in border points of India and Nepal, we begin the analysis with the sampling frame of the survey.

Sampling Frame

India and Nepal share an absolute porous (open) border of length of more than 1800 kilometres spanning over four states in India (West Bengal, Sikkim, Bihar, and Uttar Pradesh) and 25 districts of Nepal. Ideally, one should select for the study samples of Indian traders from all these Indian states. However, discussion with knowledgeable people has revealed that very little trade (formal or informal) takes place through the border region of Sikkim. Consequently, samples of Indian traders are drawn from the other three states of India. Expectedly, we need to choose traders from the corresponding border region in Nepal to analyse whether transacting environment of formal/informal traders in Nepal differ significantly from the Indian counterparts.

It was, ex-ante, decided that contraband high-value goods like gold, silver, diamonds, drugs/narcotics, arms/ammunition would be kept outside the purview of the study. This is done with the twin purposes of obtaining better quality of responses and at the same time reducing the risk of canvassing of questionnaire.

In the past, there has been no study on nature and extent of informal trade between India and Nepal. Consequently, it was decided to cover equal number of traders for formal and the informal sectors. Given the time and cost consideration, it was decided to cover 154 traders consisting of 77 traders each in formal channel and informal channel. To give a fair representation of the country effect, we have selected for our sample 78 Indian traders (split equally between formal and informal) and 76 Nepalese traders, divided equally between formal and informal traders.

According to the Treaty of Trade/ Treaty of Transit between India and Nepal, there are 22 border points for trading. However, discussion with officials at Raxaul, Kathmandu reveals that most of the official trade is carried out through the following seven centres: (1) Naxalbari /Kakarbhitta, (2) Jogbani /Biratnagar, (3) Raxaul /Birganj, (4) Nautanwa /Bhairawa, (5) Barhni /Krishnanagar, (6) Banbasa /Mahendra Nagar, and (7) Nepalganj Road /Nepalganj.[32] The discussion with them also indicated that the first five centres are also the most important centres of informal trade. Subsequently, all these centres were visited to find out the main features and dimensions of informal trade between India and Nepal from knowledgeable officials and non-official people. The visit revealed that many of the formal traders are from metropolitan cities of India like Calcutta, Delhi, Mumbai, Chennai and from Kathmandu in Nepal. However in view of the cost and time consideration, we have decided to omit names of traders from all cities except Calcutta, which is nearest to Raxaul, the principal border point between India and Nepal. The names of the centres along with number of respondents selected from each of them are shown in Table 5.1-1. As this table shows, we did not select equal number of traders from these centres. This is due to the fact that our discussion led us to arrive at a sort of ranking of the centres in the order of importance, which we captured by choosing more traders from centres of higher importance.

We have prepared for each centre lists of agencies/traders in India/Nepal exporting/importing different commodities to/from Nepal from the registers kept with the offices of custom department of the respective centres. The formal traders in India or Nepal were randomly selected from these lists. Obviously, it is not possible to prepare a sampling frame for selecting informal traders.[33] Consequently, the list of informal traders to be interviewed in different centres was prepared on the basis of discussions with knowledgeable persons. Such a

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[32] The first name before the stroke corresponds to the name of the border trade centre in India while the second one after the stroke corresponds to the same in Nepal. The names are not arranged in the order of their importance.

[33] As in the Indo-Bangladesh analysis, our list of traders included only those who were organisers of trade and not the carriers of smuggled goods across the border.

selection procedure may lead to biased sample. Thus, given the nature of the sample of informal traders, the survey estimates may only be indicative and not firm estimates.

Table 5.1-1
Centre-wise Distribution of Traders

Sl. No.	Border Trade Centre in India	No. of Respondents in the centres		
		Formal	**Informal**	**Total**
1.	Naxalbari	2	10	12
2.	Jogbani	1	6	7
3.	Raxaul	4	10	14
4.	Banbasa	5		5
5.	Nepalganj Road	4		4
6.	Nautanwa	10	8	18
7.	Barhni		5	5
8.	Calcutta	13		13
	Border Trade Centre in Nepal			
1.'*	Kakarbhitta		10	10
2.'	Biratnagar	5	5	10
3.'	Birganj	10	10	20
4.'	Mahendranagar	5		5
5.'	Nepalganj	7		7
6.'	Bhairawa	7	8	15
7.'	Krishnanagar	4	5	9
	Total	77	77	154

* 1'- indicates the border trade centre in Nepal corresponding to the border trade centre -1- in India.

Profile of Informal and Formal Traders

This section highlights the salient features of formal as well as informal traders as revealed by the survey carried out in India and Nepal. The responses of traders in both India and Nepal are tabled so that cross-border differences/similarities can be highlighted.

5.1.1 Trading Activity

Three aspects on trading activity of traders have been analysed:
Do informal and formal traders undertake both exports and imports or do they specialise in one?
Do informal traders trade only through the informal channel or do they simultaneously use the formal channel as well and similarly, do formal traders use the informal channel?

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Do formal and informal traders also sell in the domestic market or do they specialise only in cross-border trade?

The profile of informal traders in India revealed that while 31 (79%) of the respondents exported informally, 10 (26%) were engaged in importing activity (see Table 5.2.1-1). In Nepal 20 (53%) were exporters while 19 (50%) were importers. Further it can be seen that while in India only 2 informal traders were engaged in both exports and imports, in Nepal only one trader was engaged in both exporting and importing. Two inferences on trading activity of informal traders can be drawn from the survey data. First, the survey shows that informal traders in both India and Nepal are engaged in either exporting or importing activity. Second, the evidence clearly points to a two-way informal trade between India and Nepal. It needs to be pointed out that the trading activity of traders involved in Indo-Nepal informal trade is in stark contrast to that of Indo-Bangladesh informal traders where the survey revealed that traders were engaged predominantly in a one way trade where goods moved from India to Bangladesh.

The profile of formal traders in the Indo-Nepal survey shows that while in the Indian territory 33 (85%) of them were engaged in exporting, 12 (31%) were importers. In the Nepal territory, 21 (55%) formal traders were engaged in exports and 28 (74%) in imports. Thus, as in informal trade, formal traders are also engaged in a two-way trade. In formal trade a larger number of traders were involved in both exports and imports than in informal trade (see Table 5.2.1-1).

Table 5.2.1-1
Trading Activity

Category of Trader	Respondents in India		Respondents in Nepal	
	Informal	**Formal**	**Informal**	**Formal**
Exporter	31	33	20	21
Importer	10	12	19	28
Domestic market	20	27	22	23
Formal	-	-	1	-
Informal	-	5	-	5
Total respondents	39	39	38	38

A second aspect that was probed into was the link between formal and informal channels. None of the informal traders in India were using the formal channel while in Nepal there was only one such trader. Five respondents each in India and Nepal in formal trade were using the informal channel. The evidence from the survey points out that by and large traders do not trade simultaneously through both formal and informal channels. This is similar to the survey results on Indo-Bangladesh informal trade.

Information was also sought on whether informal and formal traders were engaged in cross-border trading alone or whether they also sold in the domestic

market. The survey revealed that both informal and formal traders in India and Nepal had a significant presence in the domestic market (see Table 5.2.1-1). In India 20 (51%) in the informal channel and 27 (69%) in the formal channel sold in the domestic market. In Nepal 22 (58%) informal traders and 23 (60%) formal traders sold in the domestic market. In the Indo-Bangladesh survey it was found that informal traders in India did not sell in the domestic market but concentrated only on cross-border trading.

5.2.2 Commodities Traded

Information was also sought on the type of commodities traded in both informal and formal channels. Since the trading activity of traders revealed that traders are essentially engaged in both exports and imports, respondents have been clubbed on the basis of the direction of traded goods. Thus exporters in India and importers in Nepal are classified under 'India to Nepal' while exporters in Nepal and importers in India are classified under 'Nepal to India'. Henceforth this terminology will be used for the rest of the survey wherever the emphasis is on the direction of trade. Table 5.2.2-1 tabulates the percent of respondents trading in at least one item from the different product categories. The survey revealed that 50% of the respondents in the informal sector and 59% in the formal channel were engaged in trading in food products from India to Nepal. Other important commodities traded informally from India to Nepal were textiles and consumer goods. In the formal sector 33% of the traders were engaged in trading consumer goods/machinery from India to Nepal. The question then arises whether the formal and informal trading markets are segmented. Formal traders were found to be engaged in trading of machinery items and primary products- in both these product categories, presence of informal traders was not significant.

With regard to goods traded from Nepal to India, the commodity markets were generally found to be segmented in the commodity groups mentioned in the Table 5.2.2-1. In the informal channel 70% of the respondents were engaged in trading in electronic items while 43% traded in other consumer goods. In the formal channel, food items were the most predominant category (61%) traded from Nepal to India followed by other consumer goods (48%).

Table 5.2.2-1
Commodities Traded

| | Percent of Respondents | | | |
| | India to Nepal | | Nepal to India | |
	Informal	Formal	Informal	Formal
Food	50	59	13	61
Primary including intermediate goods	8	23	7	27
Textiles	28	18	40	12
Electronics	4	0	70	0
Other consumer goods	30	33	43	48
Machinery	6	33	0	3
Other	0	7	0	3

At a disaggregated level, food items namely, rice and pulses, consumer goods namely, salt, and cosmetics, textiles mainly, ready-made garments and fabric were traded informally from India to Nepal.[34] In the formal channel, food items particularly, rice, potatoes, consumer goods such as soaps, biscuits were traded by a majority of traders from India to Nepal. On the other hand, goods traded informally from Nepal to India comprised mainly of electronics items, and a wide range of other consumer goods. In the formal channel, some of the important items traded are mustard, ginger, soaps and detergents, and herbal medicines.

Informal traders were also asked how many commodities they traded in annually. This parameter was used to gauge how specialised formal trade is vis-à-vis informal trade. Since the survey shows a presence of both exporters and importers and there is a significant difference in the nature and origin of commodities moving from Nepal to India and from India to Nepal, the respondents are classified on the basis of direction of movement of goods they are trading in. The survey shows that a majority of both informal (48%) and formal traders (59%) engaged in trading from Nepal to India trade between 2 to 4 commodities. On the other hand while 47% of informal traders traded in 2-4 commodities moving from India to Nepal, 45% of the formal traders traded in less than 2 commodities (see Table 5.2.2-2). No significant differences could be discerned between informal and formal traders in terms of number of commodities traded. In the Indo-Bangladesh survey, it was found that while in Bangladesh there was no difference between the informal and formal traders in terms of number of commodities traded, in the Indian territory informal traders had a more diversified trading pattern.

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[34]   The appendix gives list of all the commodities that are found to be traded in the survey.

Table 5.2.2-2
Number of Commodities traded

	Percent of Respondents		
Nepal to India	**<2**	**2-4**	**>4**
Informal	39	48	13
Formal	29	59	12
India to Nepal			
Informal	45	47	8
Formal	45	38	17

5.2.3 Entrepreneurial Attributes

Information was sought on the level of education of formal and informal. The survey shows that formal traders both in India and Nepal are more educated than informal traders (see Table 5.2.3-1).

Table 5.2.3-1
Level of Education of Traders

Type of Traders	Percent of Respondents			
	Below middle school	**Up to middle school**	**Secondary level**	**Graduate & above**
In India				
Informal	26	36	30	8
Formal	0	17	23	60
In Nepal				
Informal	11	32	47	10
Formal	7	11	39	43

Information was also sought on the size of firms. Table 5.2.3-2 shows that while in India 64% of the informal traders had a turnover of less than Rs. 5 lakh, 75% of the formal traders had a turnover of more than Rs. 80 lakh. In Nepal also it was found that the size of informal trading firms was smaller than those trading formally- 63% of the informal traders had a turnover of less than Rs. 5 lakh and 61% of the formal traders had a turnover of more than Rs. 80 Lakh. Thus in both India and Nepal the size of informal trading firms (in terms of total trade turnover) was smaller than that of formal trading firms.

Table 5.2.3-2
Size of Firms

Turnover Rs lakhs	Percent of Respondents			
	<5	**5 to 40**	**40 to 80**	**>80**
In India				
Informal	64	17	6	13
Formal	3	21	3	75
In Nepal				
Informal	63	26	8	3
Formal	7	18	14	61

Transacting Environment of Informal Traders

Given the institutional focus of the study the stance of the questionnaire was directed at eliciting information on the transacting environment of informal traders. Information was sought on the controllers of informal trade, sourcing of goods, entry characteristics of informal traders, risk and information, and financing informal trade in order to analyse the institutional mechanism that drives informal trading.

5.1.2 Sourcing of Goods

An aspect that needs to be examined is whether informal trade is carried out in goods produced locally in and around the border areas. If goods traded informally are predominantly produced locally in the border region, then one can presume that informal trade would be a natural option for local traders. But, if informal traders in India and Nepal deal in goods that are procured from states other than the border areas, then informal trade is clearly much more organised.

Table 5.3.1-1
Sourcing of Goods

Proportion of trade	Percent of Informal Traders	
	Goods from neighbouring states in India **India to Nepal***	**Third country goods from** **Nepal to India****
<20%	6	7
20% - 40%	4	3
40% - 60%	16	24
60% - 80%	14	17
80% - 100%	60	49

* Includes respondents in India.
** Includes respondents in Nepal

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Information was sought on the sourcing of exports from India and of exports from Nepal. In India respondents were asked what proportion of their exported goods were procured from neighbouring states and from other states in India. In Nepal respondents were asked what proportion of the exported goods were procured locally in Nepal and from third countries. Available evidence suggests that informal trade from Nepal to India takes place in third country goods[35]. This hypothesis was tested through the survey. The relevant survey data is presented in Table 5.3.1-1. The survey revealed that 60% of the respondents engaged in trading in goods from India to Nepal procured 80% to 100% of their goods from neighbouring states viz. Uttar Pradesh, Bihar and West Bengal.[36]

Further information was also sought from informal traders engaged in exports of goods from Nepal to India. Forty-nine percent of the respondents claimed that 80% to 100% of the goods they traded in were third country goods (see Table 5.3.1-1).[37] It needs to be pointed out that even though a large proportion of trade from Nepal to India is carried out in third country goods, the remaining proportion of trade is carried out in locally produced Nepalese goods.[38]

The survey also aimed at drawing information on the extent to which informal traders were involved in direct import of third country goods. To elicit information towards this end informal exporters in Nepal were asked what proportion of goods they procured from third countries directly and from wholesalers in the domestic market. The survey revealed that all the exporters purchased at least some proportion of their goods from wholesale dealers in Nepal who specialised in importing goods from third countries (see Table 5.3.1-2). Only 35% of the exporters were simultaneously engaged in direct imports from third countries. Of these, 20% imported 40% to 80% of the goods directly from third countries.

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[35]   Muni (1992)

[36]   This in contrast to sourcing of goods traded between India and Bangladesh. In the survey on informal trade between India and Bangladesh it was found that items traded informally from India to Bangladesh were procured mostly from other states and not from neighbouring state like West Bengal.

[37]   Items imported from third countries for informal exports to India are electrical goods, electronic items, sarees, blankets, crystal, cosmetics, umbrellas, garments, bags, film roll etc.

[38]   Some of the local Nepalese items traded informally from Nepal to India are spices, poppy seeds, herbal medicines, resins and stone chips.

Table 5.3.1-2 Sourcing Channel for Nepalese exporters

	0	1% - 40%	40% - 80%	80% - 100%
Import formally from third country and export informally to India	65	5	20	10
Buy imported goods from wholesalers in domestic market and export informally to India	0	30	5	65

Note: Numbers signify per cent of respondents.

Thus what does get established from the survey is that while informal trade from India to Nepal takes place in goods produced in local border areas in India, informal trade from Nepal to India takes place essentially in third country goods. These can also be seen clearly in Graphs 5.3.1-1 and 5.3.1-2. Clearly then, there is a sourcing network for procurement of goods for export from Nepal to India that links traders across countries. In fact, informal trade is as organised or better-organised than formal trade for, it implies that there is a sourcing network which involves not just the two countries trading with each other but also other countries. The survey revealed that goods are procured from China, Japan, Thailand, Hong Kong and Singapore.[39]

Another aspect concerning procurement of goods for informal exports from India was whether there was a significant leakage of administered price goods from the Public Distribution System (PDS) in India. The survey revealed that there was no evidence of any leakage from the PDS.[40]

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[39] It has to be borne in mind that third country goods for consumption in India are either imported officially into Nepal and then exported informally to India or they are imported by importers in Nepal and deflected into the Indian market before they reach Nepal.

[40] In the survey on India-Bangladesh informal trade there was evidence of leakage of goods from the Public Distribution System.

Graph 5.3.1-1 Sourcing of Informal Exports from India
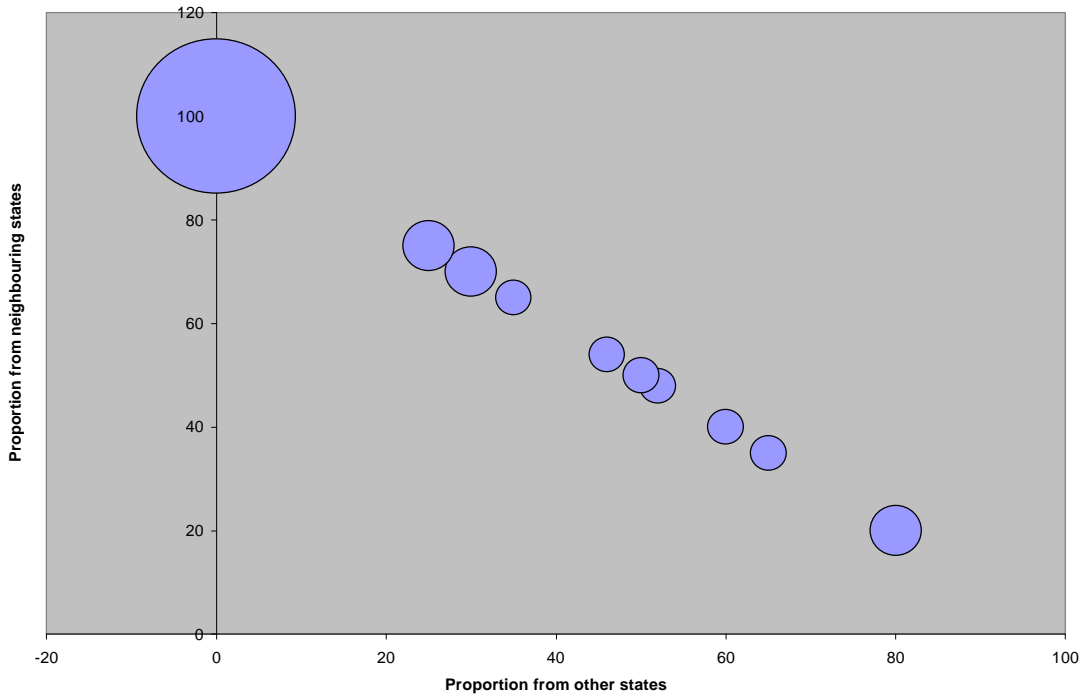
Graph 5.3.1-2 Sourcing of Informal Exports from Nepal
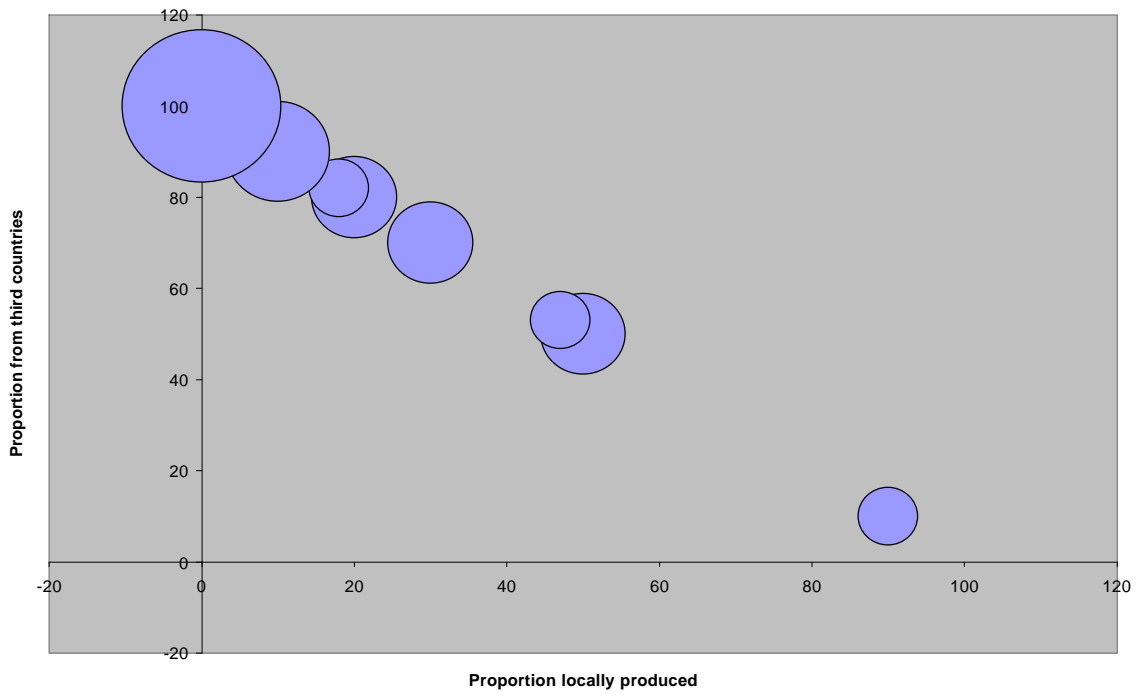
At this point it is crucial to mention the important features of forms of informal trade from Nepal to India. The informal trade from Nepal to India has two significant forms. First, imports into Nepal from third countries are carried out through the official channel. However, since Nepal is a land-locked country, these goods can reach Nepal only after they cross the Indo-Nepal border. Thus, goods arrive in India either by air or by sea and are then containerised to be transported to Nepal. From Nepal a large proportion of these imports are then informally exported to India. It is important to note here that goods are actually entering Nepal through the official channel but are going back to India across the border informally. This form of trade can be termed as *cross-border informal trade* which includes not only third country goods but also the locally produced goods in Nepal. A second form of informal trade takes place when goods are imported by Nepal, but since they are essentially for the Indian market, they are deflected into the Indian market before they enter Nepal. In this form of informal trade, there is no physical transfer of goods from Indian territory to Nepal. Also, such trade is carried out only through the official channel and is often termed as *trade deflection*.[41]

It was also found in the course of the survey that traders engaged in direct imports from third countries were concentrated in Kathmandu. These importers either sell their goods to informal traders in border areas in Nepal or are involved in trade deflection. Traders in the border areas specialise in cross-border informal trading. Our survey was canvassed only in the border areas of Nepal and India since the focus of the study was on cross-border informal trade. This explains why informal exporters in Nepal were not engaged directly in import of third goods.

5.3.2 Controllers of Informal Trade

Information was sought on the groups that control informal trade both from Nepal to India and from India to Nepal. In the case of the former we have mentioned the two forms of informal trade that are prevalent. However, since the first step towards either form of informal trade from Nepal to India is official imports into Nepal, traders' perceptions were sought on controllers of imports into Nepal. Seventy-five percent of the respondents claimed that it was the Indian traders in Nepal while 54% of the respondents said that it was local Nepalese traders who imported third country goods into Nepal (See Table 5.3.2-1).

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[41]   See Muni (1992)

Table 5.3.2-1
Controllers of Imports into Nepal

	Percent of Respondents*
Politicians	0
Bureaucrats	3
Indian Entrepreneurs in Nepal	75
Local Nepalese Traders	54

* Based on perceptions of informal and formal traders in Nepal and India

Next, information was sought on the controllers of the two forms of informal trade namely cross-border informal trade and trade deflection. In the case of cross-border informal trade the survey revealed that in India the perception was that informal trade is chiefly controlled by Indian traders in border areas (74%) (see Table 5.3.2-2). By contrast, the overwhelming perception of 95% of the respondents in Nepal was that informal trade is predominantly controlled by Indian traders in Nepal. Of the total number of informal trade respondents in both territories, 54% of them felt that informal cross-border trade is controlled by Indian traders in border areas and 46% of them claimed that it was controlled by Indian traders residing in Nepal.

Table 5.3.2-2
Controllers of Cross-border Informal Trade

Perceptions of informal traders	Percent of Respondents*		
	India	Nepal	India and Nepal
Indian traders in border areas	74	23	54
Indian traders in cities	18	41	27
Indian traders in Nepal	15	95	46
Politicians in India or Nepal	9	9	9
Bureaucrats in India or Nepal	9	27	16
Napalese traders	21	59	36

* Respondents were allowed to tick more than one option.

The stance of the questionnaire was also aimed towards drawing information on the controlling groups of informal trade through official channels viz., trade deflection. This question was posed to respondents in formal trade in both India and Nepal. An interesting revelation was that respondents in both India and Nepal said that trade deflection was mainly controlled by Indian bureaucrats in the two countries (see Table 5.3.2-3). Of the total number of respondents in India and Nepal, 39% said that trade deflection was controlled by bureaucrats while

27% said that it was controlled by Indian traders in Nepal.[42] This however is not surprising because trade deflection can take place only if Government officials play an active role in connivance with traders. What does get established through the survey is that it is Indian traders in Nepal who are controlling informal trade through official channels.

Table 5.3.2-3
Controllers of Trade Deflection

Perception of formal traders in India and Nepal	Percent of Respondents		
	India	Nepal	India and Nepal
Indian traders in border areas	13	22	18
Indian traders in cities	20	19	19
Indian traders in Nepal	20	34	27
Politicians in India or Nepal	17	6	11
Bureaucrats in India or Nepal	37	41	39
Nepalese traders	7	0	3

Note : Respondents were allowed to tick more than one option.

5.3.3 Entry into Informal Trading

Given the nature of informal trading, how difficult is entry into informal trading? What kind of costs do traders incur to make an entry into informal trading. Firms were asked how they entered informal trading. The survey revealed that in both Nepal and India entry into informal trading was by and large made through friends or relatives. While in Nepal 65% of the respondents entered through friends or relatives in India 58% of the traders entered informal trading through this channel. The evidence points to the presence of non-anonymous transacting. The significant presence of non-anonymous transacting was also confirmed in the survey on Indo-Bangladesh informal traders. Traders in Nepal and India were also asked what proportion of their turnover was paid as commission to enter into informal trading. The survey revealed that entry costs were low in both Nepal and India. 21% of the respondents in Nepal and 32% in India did not incur any entry costs while 64% of the traders in Nepal and 68% in India paid a commission of 1% to 5% of their turnover to enter into informal trading. None of the respondents in Nepal or India paid a commission of more than 10%. These results are in contrast to the Indo-Bangladesh survey where it

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[42] In the course of the survey it was found that such trade was organised by syndicates, run mostly by Indians from the border states and the metropolitan cities of India. These syndicates are responsible for organising and distribution of goods. The syndicates operate in close connivance with customs officials.

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was found that while in India all respondents paid less than 10% commission, in Bangladesh the commission paid for entry into informal trading was significantly higher.

Information was also sought on the perceptions of rate of entry/exit in informal trading. Information was sought on the rate of entry/exit ranging from high, low to medium for both exporters and importers. Since the nature and origin of trade differs depending on the direction of trade, the rate of entry/exit of informal traders is tabulated for traders sending their goods from Nepal to India and from India to Nepal. The survey shows that even though the modal frequency in both cases was in the highest range, the rate of entry/exit was higher in the case of traders who were engaged in movement of goods from Nepal to India than those from India to Nepal.[43]

Table 5.3.3-1
Entry Characteristics of Informal Traders

	Percent of Respondents			
Entry in informal trading	**Friend**	**Relative**	**Own initiative**	
Nepal	47	18	35	
India	48	10	42	
Commission paid for entry	**0**	**1% to 5%**	**5% to 10%**	**>10%**
Nepal	23	64	13	0
India	32	68	0	0
Rate of entry/exit	**High**	**Medium**	**Low**	
Nepal to India	75	22	3	
India to Nepal	51	45	4	

5.3.4 Information Channels

Informal trade hinges on how traders can obtain information on commodities and quantities to be traded. Traders in both India and Nepal were asked how they obtained such information. Respondents were given the option of ticking more than one option. The findings are shown in Table 5.3.4-1. As this table shows, making personal trips was the most important channel for information for Indian as well as Nepalese traders. It has to be borne in mind that the Indo-Nepal treaty allows for free movement of persons across borders. The fact that there is no

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[43]   In the Indo-Bangladesh survey the distinction between traders on the basis of the direction of movement of goods was not made. The survey revealed that in Bangladesh and India the rate of entry/exit was medium.

visa requirement for cross-border movement makes personal trips a possible and preferred information channel.

The second most important information channel in India is the distribution network. It is important to note that the distribution network serves the dual purpose of both marketing and information channel. While in the Indo-Bangladesh survey both these channels were found to be important, an important difference is in the reliance on the authorised channel. While in Indo-Bangladesh informal trade this link was relatively weak, in the case of Indo-Nepal informal trade traders rely more on the authorised channel for information. Even though informal traders in Nepal and India do not use the formal channel, the link with the formal channel is established through procurement of goods. The fact that it is formal traders in Nepal who import goods from third countries to be sold to informal traders, a link is established between formal and informal traders through the distribution/procurement network. The dependence on official media, enforcement agencies and trade fairs as channels of information flows is virtually absent for traders engaged in informal trader in either country.

Informal traders were also asked whether they were selling in the domestic market prior to entering cross-border informal trading. Selling in the domestic market could serve both as an information channel and as a formal cover for being involved in informal trading. The survey revealed that 44% of the traders in India and 60% of the traders in Nepal sold in the domestic market prior to entering informal trading. In the Indo-Bangladesh survey it was found that Indian traders did not sell in the domestic market before entering informal trading.

Table 5.3.4-1
Sources of Information Channels

	Percent of Respondents	
	In India	**In Nepal**
Authorised channel	31	37
Personal trips	85	68
Distribution network	33	34
Official media	3	0
Enforcement agencies	3	0
Trade fairs	0	5

Note: Respondents had the option of ticking more than one option.

Given the institutional focus of the study, the stance of the questionnaire was directed towards eliciting information on contractual arrangements between informal trading partners. Respondents were asked how their trade deals were finalised with the alternative of ticking more than one option. In the Indian territory 46% of the respondents stated that prior dealing with the trading partner was an

important factor in finalising trade deals (see Table 5.3.4-2). Further, 23% of the respondents stated that reference from a third party that knew both trading partners was also an important instrument for confirming trade deals. Thus, confirming non-anonymity of trading partners was an important way of settling trade deals. Making advance payments was also an important instrument for 38% of the Indian informal traders for ensuring trade deals. In the Nepal territory 29% of the respondents claimed that goods were taken on credit while 28% claimed that advance payments were made to conclude trade deals. The infrequent use of collateral in both India and Nepal provides indirect evidence supporting absence of significant information asymmetries among transacting individuals. These findings are similar to those on Indo-Bangladesh informal trade where the Indian traders follow the same pattern as those involved in Indo-Nepal informal trade. Nepalese traders and the Bangladeshi traders showed similarities in the way informal trade deals are finalised.

Table 5.3.4-2
Finalisation of Trade Deals

Modes	Percent of Respondents	
	India	**Nepal**
Advance payment	38	28
Collateral used	5	13
Prior dealing	46	16
Third party reference	23	18
Goods on credit	15	29

Note: Respondents were allowed to tick more than one option.

5.3.5 Risk

Respondents in both India and Nepal were asked about the risk attributes arising out of the transacting environment of informal traders. Information was sought on both risk experiences of traders as well as on their perceptions of risk in informal trading. Exporters and importers were asked to rank their perception on the extent of risk ranging from never, rarely to frequent. Risk for exporters could arise due to delay in delivery of goods, default in payment, and due to seizure. Risk for importers could arise due to goods not conforming to specifications, default in delivery and delay of goods Since the risk attributes differ for exporters and importers, the survey results are not tabulated for separate territories but the responses of exporters in India and Nepal have been combined. Similarly the responses of importers in both countries have been combined.

The survey revealed that the incidence of risk experience was found to be very low for both exporters and importers. Only 3% of the exporters said that they had faced default in payment by trading partner and 7% claimed they had lost goods

due to seizure. While 19% of the importers faced delays in delivery of goods, 11% claimed that goods received did not conform to specifications.

Information was also sought on the traders' perception of risk incidence in order to confirm the responses obtained on risk experience of informal traders. The modal range for each of the attributes of both exporters and importers was either 'never' or 'rarely'. The responses were marked by the absence of frequent occurrence of any risk attribute (see Table 5.3.5-1)

Table 5.3.5-1
Risk Perceptions of Informal Traders

	Percent of Respondents*	
	Importers' Risk	Exporters' Risk
Goods not conforming to specifications:	59 (never)	
Incidence of default in delivery of goods	65 (never)	
Incidence of delay in delivery of goods:	68 (rarely)	63 (rarely)
Default in payment		69 (never)
Incidence of goods lost due to seizure		55 (rarely)

* Percent of respondents in modal class; labels in parentheses refer to modal range in options: never, rarely, and frequently.

Further, informal traders were asked to give their perception on proportion of output lost due to seizure. We find from Table 5.3.5-2 that 66% of the respondents in Nepal and 67% in India felt that there was no loss of output due to seizures. Only 26% of the traders in Nepal and 23% in India said that informal traders lost 1% to 5% of the value of their turnover due to seizures. The losses due to seizures are low because the probability of getting caught by the enforcement agencies is very low. According to Table 5.3.5-2, 74% of the respondents in Nepal and 81% of the respondents in India claimed that the probability of getting caught is less than 0.03. In fact none of the respondents said that the probability of getting caught exceeded 0.1. It may be recalled here that in the Indo-Bangladesh survey the probability of informal traders getting caught was higher than in informal trade between India and Nepal.

Table 5.3.5-2
Assessment of Risk for Informal Trader

	Percent of Respondents				
Prop of output lost due to seizure	0	1% -5%	5% - 10%	>10%	
Nepal	66	26	5	3	
India	67	23	10	0	
Probability of goods being seized	<.03	0.03 - 0.05	0.05-0.1	0.1-0.2	>0.2
Nepal	74	18	8	0	0
India	81	16	3	0	0

If risk experienced and perceived by informal traders' regarding various attributes is low, then clearly traders have developed mechanisms to mitigate risk. Non-anonymous transacting is an important mechanism that minimises risk in informal trading. Another feature observed in the survey was that a large number of respondents in both India and Nepal undertake personal trips to obtain information on commodities and quantities to be traded. This again is a mechanism to reduce risk. An obvious way to ensure movement of goods across borders is to make payments to enforcement agencies (see Table 5.3.5-3).

Table 5.3.5-3
Risk Mitigation

	Informal Traders (Percent of Respondents)			
Payments to enforcement agencies (%)	1-3 %	3-6 %	6-10%	> 10 %
India	59	24	14	3
Nepal	65	25	10	0

Another aspect that needed to be investigated was the risk sharing arrangements between trading partners. Information was sought on the nature of risk sharing arrangements in case of goods being seized by enforcement agencies. Table 5.3.5-4 shows that in both India and Nepal risk was essentially borne by the sender of goods. Since informal trade between India and Nepal is essentially a two way trade, the arrangement where risk is borne by the sender appears to be the norm. The risk sharing arrangement in Indo-Nepal trade is different from the Indo-Bangladesh informal trade where a one-way trade takes place from India to Bangladesh.

Table 5.3.5-4
Risk Sharing Arrangements

Risk sharing in case of seizure	Informal Traders (Percent of Respondents)			
	Equally	Primarily by sender of goods	Primarily by receiver of goods	By the party in the country in which goods are seized
India	5	95	0	0
Nepal	11	50	25	14

Respondents were also asked how risk was shared between trading partners in case of default in quality and delay in delivery of goods. Nearly, 95% of the respondents in India and 63% in Nepal claimed that risk in case of default in delay and delivery of goods was borne primarily by the sender of goods (see Table 5.3.5-4).

5.3.6 Transaction Costs

Informal traders incur transaction costs in the form of payments made to enforcement agencies as bribes, transportation costs, cost of credit and cost of currency conversion. Table 5.3.6-1 shows that 72% of the informal traders in India and 61% in Nepal had to bear transactions cost of less than 10% of their turnover. It may be recalled that transactions cost for Indian traders are similar whether they are involved in Indo-Bangladesh informal trading or Indo-Nepal informal trading. The transactions cost for Bangladeshi informal traders was higher than that of Nepalese informal traders.

Table 5.3.6-1
Transaction Costs

Transaction Cost	Percent of Informal Traders			
	<10%	10% to 20%	20% to 30%	>30%
India	72	25	3	0
Nepal	61	36	3	0

Another aspect that was probed into was whether bribes had declined with liberalisation. With a free trade agreement between India and Nepal it is expected that with liberalisation, bribes should have declined. However when respondents were asked whether bribes (as a percentage of total turnover) had increased, decreased or remained unchanged with liberalisation, 87% of the respondents in India and 94% of the respondents in Nepal said that bribes had increased or remained unchanged (see Table5.3.6-2). What is worth noting is that only 13% of the respondents in India and 6% in Nepal said that bribes had decreased.

Table 5.3.6-2
Liberalisation and Bribes

		Percent of Respondents					
		Indian Informal Traders			Nepalese Informal Traders		
		Increase	Decrease	No change	Increase	Decrease	No change
Bribes to officials		44	13	43	51	6	43

Traders were asked why bribes had increased. Several respondents felt that bribes had increased because of a greater involvement of officials at higher levels. Similar to the Indo- Bangladesh survey, respondents in the Indo-Nepal survey too mentioned frequent transfers of BSF and customs officials which meant higher bribes had to be paid by traders to establish new relationships.

5.3.7 Financing Informal Trade

Financing informal trade is an important aspect of informal trading activity. Information was sought on the transacting environment of financing informal trade. Cross-border trade transactions are complete only when payments are made. The issues here are- what are the sources of finance for informal trading and what are the modes of financing such trade.

The survey revealed that all the respondents in India and 97% of the traders in Nepal raised at least some proportion of finances from their own funds. Borrowing from friends and relatives was the second most important source of financing (see Table 5.3.7-1). The role of money lenders was not found to be very significant in financing informal trade - only 10% of the respondents in India and 13% in Nepal borrowed from informal moneylenders. The use of the official or formal banking system for borrowing funds was also not important in both India and Nepal.

Table 5.3.7-1
Sources of Finance for Informal trade

	Percent of Respondents	
	India	Nepal
Friends and relatives	23	47
Informal money lenders	10	13
Banks	0	5
Own finance	100	97

Note: Respondents were given the choice of ticking more than one option.

Mode of financing informal trade is another aspect that the survey focused on. While respondents were given several options of mode of financing i.e. gold, silver, Indian currency, Nepalese currency, US$ and the 'Hawala', the survey responses were marked by the presence of only two modes of financing- the Indian rupee and the Nepalese rupee (see Table 5.3.7-2). Since the survey had both exporters and importers, the responses of both types of traders are tabulated. It can be seen from the table that a majority of the exporters and importers in both India and Nepal financed between 80% to 100% of trade in the Indian currency. In fact it was found in the course of the survey that the Indian currency was readily accepted in Nepal.

Table 5.3.7-2
Mode of Financing

	India		Nepal	
	Exports	**Imports**	**Exports**	**Imports**
Gold	-	-	-	-
Silver	-	-	-	-
Indian Rs	59 (80%to100%)	78(80% to100%)	52 (80%to100%)	78 (80 to 100%)
Nepalese Rs	59 (<20%)	37(<20%)	68 (<20%)	47(20%)
US $	-	-	-	-
Hawala	-	-	-	-

Note: Respondents were asked to give the proportion of the various modes of finance. The table gives only the modal frequencies (percent of respondents) along with the modal range in parentheses

Informal traders in Nepal were also asked what proportion of the partner currency was converted to local currency. Only 31% of the traders claimed that they converted 80% to 100% of the partner currency into local currency. Traders who did not convert their currencies either used the Indian currency for purchases in the domestic market or used it for future trading.

5.3.8 Why Informal Trade takes Place

Factors influencing informal trade were classified under three broad categories- (i) those that were related to the policy environment (ii) institutional factors and (iii) non-economic factors. Our findings on factors are shown in Table 5.3.8-1. In this table, traders in both countries were classified on the basis of the direction of movement goods. Table 5.3.8-1 shows that for traders involved in sending goods from Nepal to India, goods imported from third countries was the most important factor. This factor is clearly related to the difference in tariffs with the rest of the world prevailing between Nepal and India. In the context of SAFTA, this implies that third country goods do not meet the requirement of rules of origin principles and are therefore traded informally from Nepal to India. What can be inferred is

that tariffs play a crucial role in determining the informal trade flows from Nepal to India.[44] Other important factors were all related to institutional factors. No paperwork, lower bribes and quick realisation of payments in the informal channel were cited as the most important factors influencing informal trade from Nepal to India (see Table 5.3.8-1).

On the other hand institutional factors are the most important factors influencing informal trade flows from India to Nepal. The important ones are- no paperwork, quick realisation of payments and no procedural delays. All these factors give rise to transaction costs in the formal channel. A spearman's rank correlation of the ranking of the factors influencing trade flows from Nepal to India and from India to Nepal was only 0.58. The one factor which could be causing such a low correlation is the importance of third country goods in informal trade flows from Nepal to India. On eliminating this factor, the rank correlation increases to 0.89. The difference in the rank correlation can thus be ascribed to the relative importance of third country goods in informal trade flows from Nepal to India.

Table 5.3.8-1
Reasons for Informal trade

	Percent of Respondents	
	Nepal to India	India to Nepal
Low transportation costs	43	55
Lower time to reach destination	20	28
Imported from third country into Nepal	70	0
No paperwork	62	78
No procedural delays	42	66
Lower bribes	60	48
Quick realization of payments	44	70
Presence of haats/bazaars	13	36
Absence/shortage of storage/warehousing facilities	8	17
Ethnic ties across the border	15	31
Absence of trading routes	1	8
Leakage of administered price goods	1	3
Presence of high duty in official channel	34	27
Quantitative Restrictions	10	17
Easier to meet demand from across the border rather than the domestic market	25	23
Nexus between BSF personnel and the traders	27	35
Nexus between traders and politicians	4	4

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[44]   The difference between Nepal and India's tariff rates on goods traded informally from Nepal to India ranged between 5% and 30%.

5.4 Transacting environment in Formal Trading

It has been noted earlier that the trade between India and Nepal is governed by Indo-Nepal Treaties of Trade, of Transit, and Agreement for Co-operation to Control Unauthorised Trade, 1996. Under this treaty, India provides on a non-reciprocal basis without quantitative restrictions (QRs) duty free access to the Indian market for all but a few Nepalese manufactured products. Such imports from Nepal are facilitated through a simple procedure of Certificate of Origin issued by Federation of Nepalese Chambers of Commerce and industry and other affiliated Chambers of commerce to which this power has been delegated by His Majesty's Government of Nepal (HMGN). However, Nepalese import continues to be subjected to Indian countervailing duty. Furthermore, there is provision in the treaty for goods which do not fulfil the conditions required by the Certificate of Origin, to obtain preferential treatment in India provided they are manufactured in the small scale units in Nepal. The GOI extends parity in the levy of Additional Duty on such Nepalese products equal to the treatment provided in the levy of effective Excise Duty on similar Indian products under the Indian Customs and Central Excise Tariff. On its part, Nepal exempts, wholly or partially, imports from India from customs duty and QRs to the maximum extent compatible with their development needs and protection of their industries. Also, both the countries, on a reciprocal basis, would exempt the import of such primary products from basic custom duty as well as from QRs, as may be agreed upon, from each other. Bilateral trade between the two countries would normally be conducted in Indian Rupees, though provision exists for importing few commodities from India against payment in convertible currency. Moreover, the treaty states that payment for transactions between the two countries would continue to be made in accordance with their respective foreign exchange laws, rules, and regulations.

While the treaty provides incentive for Indo-Nepal bilateral trade, it does not imply that the exporters/importers would be waived from import/export documentation procedures. For an Indian trader, exporting through official channel consists of several steps starting with obtaining import-export licenses, imports for exports etc, quality control certification, and ending with receiving export remittances through bank. Importing legally is by no mean simple for an Indian trader as it also involves several steps such as obtaining import licenses, letter of credit authorisation form, availability of finance, freight and insurance certificates, clearance from custom, etc. While these procedures are present in some form in the trade regulations of Nepal, Nepalese traders benefits to some extent due to the simplicity of rules in Nepal. For instance, all imports may be brought in Nepal without a licence barring a few banned or restricted items such as (a) products injurious to health; (b) arms and ammunition etc (c) communication equipment etc, (d) valuable metal and jewellery, and (e) beef and beef products.

In general, documentation requirements are extensive for Indian traders and delays are frequent. They exist for the Nepalese traders as well though on a lower scale. These cost traders time, money and cash, including additional detention and demurrage charges, making it more expensive to trade. All these procedural complexities give rise to a type of costs to exporters, which are not directly related with the production process. Following Coase (1960) terminology, we have called these as transaction cost, which exporters or importer incur in terms of time constraint and/or in the form of money resources they spend in the process.

As noted earlier, the transaction cost in trading arises due to the procedural complexities. To be specific, they may originate due to one or several of the following factors: (a) multiplicity of rules and regulation; (b) stringent but inefficient implementation processes; (c) bottlenecks in transportation, communication; (d) absence of information transparency; (e) bureaucratic approach of public agents; and (f) institutional factors which intensify rent-seeking activities by the public agents. Earlier study on estimation of transaction cost in the Indian context has pointed out that the rent seeking activities of the public agents are omnipresent at the different stages of export transaction. How high is the Indian transaction cost relative to that of Nepal? We have used information from our survey data to quantify below the transaction cost of formal trading activities in Nepal and India in terms of additional time required and the amount of bribes that the trader has to pay to avoid unlawful harassment or procedural delays.

The export-import policy documents of India and Nepal are scanned to understand the nature and magnitude of procedural complexities at different stages of export/import transactions. Since trade regulation are not same in both the countries, we have decided to compare the sources of transaction cost at the following steps that are common to most trade transaction:[45]
problem in obtaining different licenses,
problem associated with custom authorities,[46]
problem relating to bank,
problem associated with transportation of goods.

Table 5.4-1 shows our survey findings on the incidence of transaction cost in India and Nepal arising from the above four sources. As this table shows, Nepalese traders faced fewer problems due to licensing-- 48% of Nepalese traders indicated that they had faced positive transaction cost against 55% of

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[45] Another source of transaction cost could be obtaining various duty refunds. However, most of the traders in our survey answered that question as *not applicable.* So, we have not analysed this source of transaction cost.

[46] For exporters from Nepal, this includes problems faced in obtaining rules of origin certification.

Indian traders.[47] Note that traders in both countries indicated that incidence of transaction cost due to custom problem are few.[48] This is expected since trade between them is in all reality free of tariff and quantitative restriction. With regard to problem relating to banks and transportation, our survey revealed that occurrence of problem (thereby positive transaction cost) is marginally more in the Nepalese territory.

Table 5.4-1
Incidence of Transaction cost

Problem faced by the traders at the following steps of transactions	Incidence of transaction cost faced by Indian traders		Incidence of transaction cost faced by Nepalese traders	
	No of responde-nts	% of traders indicating positive cost	No of responde-nts	% of traders indicating positive cost
Licenses	36	55.12	39	48.69
Custom	37	13.81	39	17.81
Banks	37	30.02	38	35.51
Transportation	37	45.94	39	48.45

Table 5.4-2 depicts the break-up of the additional time taken at different steps of transaction. The additional time taken is estimated in our case as the difference between the actual time taken and the average of trader's perception about the time that should be required at these stages. The table reveals that licensing typically takes more than 20 extra days for 50 percent of Indian traders requiring additional time. Moreover, 35 % of the remaining Indian traders has to spend 11 to 19 additional days to sort the licensing problem. It takes less than 10 additional days only for 25 % of Indian traders. By contrast, Nepalese traders indicated that licensing required more than 20 days for 61% of traders, 11-19 days for 9% of traders and less than 10 days for 30% of traders. Table 5.4-2 also shows that Nepalese traders in comparison to Indian traders faced higher transaction cost (in terms of additional time required) from their respective authorities due to banking and transportation problem.

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[47] Whenever a trader indicates that he has faced problem at licensing stage, we consider it to be a incidence of positive transaction cost.

[48] Earlier, comparison of experience of traders in respect of Indo-Bangladesh trade has revealed a higher incidence of presence of transaction cost.

Table 5.4-2
Distribution of Transaction Cost

Additional time required) at the following steps of transactions	% of Indian traders reporting additional time required (in days)			% of Nepalese traders reporting additional time required (in days)		
	1-10 days	11-19 days	More than 20 days	1-10 days	11-19 days	More than 20 days
Licenses	25	35	50	30	9	61
Custom	100			100		
Banks	100			93	7	
Transportation	100			92	8	

Information was also collected from the traders in India/Nepal regarding the relative importance (in order of payments as bribes) of various components of transaction cost. To be specific, traders were asked to rank separately their payments to the various authorities for the export and the import transactions. The traders were given the 5 possible options as shown below in Table 5.4-3. The combined rank score for each head is obtained by taking the weighted average of the number of respondents with same rank position, the weights being calculated as the ratio of the corresponding rank position in reverse order and the sum of the possible rank positions.[49] The combined rank score is used to arrive at the final rankings as perceived by the traders (see Table 5.4-3). As this table shows, Indian as well as Nepalese exporters consider miscellaneous procedural delays followed by delays at the banks are two main components of transaction cost. Note that, Nepalese traders did not consider payments towards obtaining certificate for rule of origin as a major source of transaction cost. On the import side, Indian traders consider custom clearance as the most important components of payments followed by miscellaneous procedural delays, and transportation. By contrast, transportation was the major source of payment for Nepalese traders for importing goods from India.

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[49]   That is, if the traders have given ranks as 1 to 5, the weights are 5/(1+2+3+4+5),
       4/(1+2+3+4+5) and so on.

Table 5.4-3
Ranks of various components of Transaction cost (in terms of payments)

	Relative importance of various components of payments to various authorities as perceived by:	
FOR EXPORTERS	**Indian Traders**	**Nepalese Traders**
Obtaining Licence	4	4
Avoid delays at bank for obtaining export credit or export remittances	2	2
Delay in Transportation	3	3
Miscellaneous Procedural delays	1	1
Rules of Origin	N.A.	5
FOR IMPORTERS		
Obtaining import licence	4	5
Custom clearance	1	2
Bank to clear import payments	5	4
Avoid delay in transportation	3	1
Miscellaneous procedural delays	2	3

Note: Ranks are in decreasing order of importance.

Finally, what is the magnitude of combined transaction cost as share of their turnover? The relevant data are tabulated in Table 5.4-4. As this table shows, the transaction cost as percent of turnover is lower in Nepal than in India. Note that 36% of the respondents in India have indicated that transaction cost could be more than 30% where as only 16% of the respondents in Nepal have reported it to be more than 30%. It should be mentioned that the bribe component of transaction cost as percent of turnover in both countries usually lie between 1% to 5%. Further, our survey of traders engaged in Indo-Nepal trade indicates that payments to officials as bribes for export/import activities never exceed 10%.

As in the case of Indo-Bangladesh survey, respondents were asked whether bribes as a percentage of their turnover have declined over time due to greater transparency as a result of liberalisation. Only 6 % of formal traders in Nepal and 12 % of same in India have indicated that bribes have declined. By contrast, 42% in Nepal and 38% in India have claimed that bribes have increased.[50]

Similar to the Indo-Bangladesh case, it was found here also that formal traders did not approach the courts for dispute settlement. Rather, the disputes are settled mutually.

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[50] 52% and 50% of respondents in Nepal and India respectively have indicated status quo.

Table 5.4-4
Magnitude of Transaction Cost in Indo-Nepal Trade

Transaction cost as percent of their turnover in the range of	Percent of Respondents in	
	India	Nepal
Less than 10%	33	18
10% to 20%	13	42
20% to 30%	18	24
More than 30%	36	16

Note: Transaction cost here includes total payment as bribes to officials at various stages plus transportation cost plus cost of credit.

Discriminating Characteristics of Formal and Informal Traders

In the earlier sections, we have analysed empirically characteristics of formal and informal traders engaged in Indo-Nepal trade as well as important aspects of modality and behaviour of such trade. In this section, these are further analysed by univariate and multivariate statistical criteria.

5.5.1 Univariate Analysis of Differences

Like in the case of univariate analysis of differences in Indo-Bangladesh informal/formal trade, we have used Wilcoxon signed-rank test. The results of the univariate statistical tests in terms of twenty parameters governing different aspects of trader/trade are depicted in Table 5.5.1-1. As this table indicates, the tests have been carried out separately for the characteristics of Indian traders and Nepalese traders. The database for our test on Indian side is thirty-nine pairs of traders while on the Nepal side we have thirty-eight pairs of observations. The signed-rank test can be, as usual, either one- or two-tailed. Since we have prior belief regarding the direction of the difference in many cases, we have conducted one-tailed tests at 10 percent of significance.

Recent literature on international trade has highlighted the importance of ethnic linkage in trade (Rauch & Trindade, 1999). The studies by Chaudhari (1995), Taneja (1999) have also indicated that ethnic ties (family linkages) across the border play a dominant role in aiding/abetting informal trade between India and Bangladesh. In this context, it is worthwhile to see whether the same behaviour holds for Indo-Nepal informal trade. Our test indeed indicates that informal traders in both the countries show significantly more ethnic linkages than the formal ones.

Table 5.5.1-1
Results of Wilcoxon's Signed-ranked test

Sl. No.	Parameter	Nepalese Territory*		Indian Territory*	
		Z statistics	Inference	Z statistics	Inference
1.	Ethnic ties (Ethnic)	-1.706	Fo<If	-2.810	Fo<If
2.	Education level (Edu)	2.417	Fo>If	1.333	Fo>If
3.	Awareness of SAFTA (SAFTA)	2.50	Fo>If	2.485	Fo>If
4.	Number of commodities traded (Com #)	2.821	Fo>If	3.233	Fo>If
5.	Trading in same commodities (Same)	2.029	Fo>If	1.947	Fo>If
6.	Time taken for first trade deal (TimFr)	1.138	Accept null	1.244	Accept null
7.	Time taken for subsequent trade deals (TimSq	2.936	Fo>If	2.819	Fo>If
8.	Presence in domestic market (PreDom)	1.295	Fo>If	-2.485	Fo<If
9.	Turnover	5.421	Fo>If	4.307	Fo>If
10.	Profit	1.603	Fo>If	-2.632	Fo<If
11.	Border price differential (BorPr)	2.751	Fo>If	-0.231	Accept null
12.	Rate of entry/exit (Ent/Ex)	0.830	Accept null	0.16	Accept null
13.	Trading Period (TrdPrd)	2.820	Fo>If	0.314	Accept null
14.	Margin fluctuation (MarFl)	3.704	Fo>If	-1.213	Accept null
15.	Transaction Cost (TC)	4.575	Fo>If	4.488	Fo>If
16.	Own finance (OwnFin)	1.76	Fo>If	-2.768	Fo<If
17.	Interest rate (Int)	-0.915	Accept null	-2.485	Fo<If
18.	Third country import (Nepm)	-4.412	Fo<If	-2.823	Fo<If
19.	Local area trade (Local))	1.117	Accept null	.534	Accept null
20.	Risk due to goods not conforming to specification, default in delivery, or delay in delivery (Risk)	-1.211	Accept null	-1.112	Accept null

* Fo pertains to formal while If pertains to informal. Tests have been carried out at 10% level of significance

Do informal traders show low education, implying less access into formal channels of trading? Earlier, we have seen in the context of Indo-Bangladesh trade that the informal trader displays lower education levels than the formal ones. Our conclusion from the statistical test on education levels of traders indulging in Indo-Nepal trade is that the attribute shows similar pattern.

Expectedly, familiarity with the trade policy documents of both countries is a must if one has to indulge in official trade. Thus, apart from being educated, a trader needs to have a degree of awareness regarding it. We have attempted to judge this by the indicator variable *awareness of SAFTA*. The direction of differences

suggests that that awareness of SAFTA is more among the formal traders than their informal counterparts.

It has been argued by Choudhari (1995) that because of the poor transport networks and storage facilities, informal trader plays a role to narrow down the short-term demand/supply gap in the border region of India and Bangladesh. If that is so, the informal trader relative to formal counterpart should not carry out transaction in the same commodity over time. Moreover, the same should indulge in trading more commodities depending on the demand/supply condition. Our analysis of informal trade between India and Bangladesh in the earlier section partially supports this hypothesis. Naturally, one wonders whether the same is true in the case of Indo-Nepal informal trade? The results of the test indicate that on both counts, significant differences in attributes are observed for Indian as well as Nepalese traders.

How well the information channel of informal trading arrangement is developed is judged by the following two attributes: (a) *time taken for first trade deal* and (b) *time taken for subsequent trade deal.* The result shows that informal trading arrangement in India as well as Nepal takes less time for subsequent trade deals than the formal counterpart. However the null hypothesis is accepted in both the territories for the other attribute, namely, *time taken for first trade deal.*

It has been argued by others (Srivastava, 1999) that trading in the domestic market may serve as a good cover for informal trades. Is it the typical behaviour of only informal trader? Our data support the opposite hypothesis for the Nepalese traders: formal traders exhibit larger presence in domestic market. However respondents in the Indian territory of our survey indicate that informal traders exhibit larger presence in the domestic market.

Is the informal trade characterised by large number of agents, each having low turnover? Our survey does not provide any information regarding the relative size of the agents operating in the two markets. However, we have used data on the size of the trading firms in the two samples (formal and informal traders) to test whether the formal traders have significantly larger size. We do find that formal traders operate at a bigger scale than the informal one.

Maximisation of profits is the objective function at individual level in any trading activities. Naturally, one ponders whether there is significant difference between the profit margins in the two channels. The test on differences in profit margin of Nepalese traders between the two channels is rejected in favour of the alternative hypothesis of lower profit margin in the informal traders. However for Indian traders, we find that profit margin is more for the informal traders.

Expectedly, the border price differential is the driving force for sustaining informal/formal trade activities. In this connection, one may question whether traders prefer one channel to another depending on the border price differential.

Our result partially supports the hypothesis in the sense that higher border price differential prevails for trading through formal channel in the Nepalese traders.

Is the informal trading characterised by higher rate of entry and exit than the formal counterpart? In other words, is the formal trader typically in business over a longer period than the formal one? The statistical test on rate of entry and exit fails to identify any differences in the traders in either country. However, the test for the attribute, *trading period,* suggests that formal traders in Nepal are typically in business over a longer period than the formal one.

If the informal traders function because of short-term demand/supply gap, and they shift their commodities from time to time, their margin should exhibit higher fluctuation than the formal one depending on the demand/supply situation. On the contrary, the test for the Nepalese traders shows that the fluctuation of margin is more for the formal trader. However, the test fails to identify any differences for the Indian traders.

The earlier section has emphasised the role of transaction cost in trade. Naturally, one ponders whether informal trade flourishes because of lower transaction cost. The direction of differences on transaction cost suggests that transaction cost in formal in India as well as in Nepal is significantly higher than the informal counterparts.

The next parameter of analysis looks at the financing part of formal and informal traders. We have earlier found the evidence that informal traders have a smaller size of turnover. Being quasi-legal in nature, informal traders do not have access to finance from legal financial institution under this head. How do they meet their financing need? Do they use their own finance for carrying out business? Inference from the test is that for the Indian traders, own finance plays a larger role in informal trade than the formal counterpart. However, the picture on the Nepalese territory is just the opposite: own finance is more in the case of formal traders than the informal one.

If a trader needs to borrow, the formal one has access to legal banking sector while the informal counter has access only to informal banking sector.[51] The later market usually carries a higher interest rate. What do our survey findings indicate on this count? The analysis indicates that Indian informal traders pays higher interest rate than the formal one whereas the test fails to bring out any significant differences in the interest rate between the two types of Nepalese traders.

It has been argued in the earlier section that third country import is one component of India's import from Nepal through both the channels. Statistically

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[51] Of course, the possibility is always there that an informal trader borrows from banking sector under different purpose and uses the loan for informal trading. This is feasible if the informal trader also trade in domestic market.

speaking, can one say whether this pattern of trade is more through informal channel? Our evidence from the test is that this phenomenon is more in the case of informal trade.

Transporting goods from eastern part of Nepal to western part is costly as the roads run through hilly region. In this situation, it is reasonable to bring goods, formally or informally through neighbouring region in India. If there is no official trading routes at the area, traders in both the countries will meet their demand from neighbouring region. Is this pattern more in the case of informal trade? Our test fails to identify any significant differences in the attributes *local area trade* between the two types of traders in India or Nepal.

The next attribute relate to the different kinds of risk that a trader, informal as well as formal, faces in carrying out their transaction. Since informal trade is not legal, do the informal traders face higher risk? The statistical tests fail to identify any significant differences in risk between the two of trade in either country.

5.5.2 Multivariate Analysis

The factors identified by the univariate tests as important in differentiating the two groups are then simultaneously included in a multivariate test to control for possible mutual interaction. Like in the analysis of Indo-Bangladesh trade, our preferred choice of multivariate technique is step-wise discriminant analysis. Here also, discriminant analysis is used to examine whether informal traders in Nepal (or India) differ from formal, and if so, in terms of which characteristics.

Discriminant Analysis of Nepalese traders

The univariate analysis of statistical significance of differences of Nepalese traders has identified 15 attributes. Since discriminant analysis demands that none of discriminating variables should have high correlation with other variables, one needs to drop several of the variables. Taking the criteria of cut-off point of correlation between two variables as $\pm$ we have decided to drop the following
five variables —number of commodities traded (Comm #), time taken for subsequent trade deals (TimeSq), trading in same commodities (Same), share of own finance (OwnFin) and fluctuation of margin (MarFl)-- to begin our discriminant analysis.[52]

Table 5.5.2-1 presents "within group correlation matrix" on all 10 possible discriminating variables included in our analysis. It can be seen from the table

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[52] As expected, the variable TimeSq is correlated with TC. The variable MarFL is found to be correlated with variables such as BorPr, PreDom and hence is dropped. The variables Same and Comm# are found to be correlated with each other and MarFl, BorPr, PreDom and so we have decided to exclude them. OwnFin is found to be correlated with Turnover and TC and hence are also dropped.

that all of the variables satisfy our cut-off point of correlation, namely $\pm$. Thus, the assumption of the discriminant analysis that none of the possible discriminating variables have high correlation holds true.[53]

Table 5.5.2-1
Within groups correlation matrix

	Turnover	PreDom	TrdPrd	BorPr	SAFTA	TC	Ethnic	Edu	Nepm	Profit
Turnover	1									
PreDom	0.062	1								
TrdPrd	0.195	0.115	1							
BorPr	0.054	0.381	0.193	1						
SAFTA	-0.375	-0.014	-0.132	0.328	1					
TC	0.358	0.072	0.229	0.146	-0.294	1				
Ethnic	0.134	-0.091	0.197	0.036	-0.307	-0.024	1			
Edu	0.309	0.308	0.395	0.173	-0.201	0.212	0.167	1		
Nepm	-0.336	-0.103	-0.149	-0.149	0.129	-0.210	-0.048	-0.312	1	
Profit	0.016	0.016	0.106	0.163	0.120	0.134	-0.124	0.041	-0.117	1

Table 5.5.2-2 provides the summary of the step-wise procedure and variables selected with their relative contribution to the discrimination in terms of their partial F-ratio (F to enter or remove). The procedure selects only 4 of the 10 variables to be significant discriminants, namely turnover, education, third country import, and transaction costs. The remaining ones are not significant in the multivariate context. Note that except for the parameter third country import, none are direct policy related parameters. These variables might be good discriminators on their own, but they do not add to the discriminating information contributed by the significant variables. Hence their unique contributions to the analysis are inadequate.

It can be seen from Table 5.5.2-3 that our discriminant functions are able to classify correctly nearly 89 per cent of the formal respondents and 95 per cent of the informal respondents. So, they appear to be good fit.

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[53] See Table 8.1.1 for explanation on the notations of the variables.

Table 5.5.2-2
Summary of step-wise procedure of Discriminant Analysis*

Steps	Discriminating variable entered	F to enter/ remove	Degrees of Freedom	No. of variables included
1.	Turnover	44.570	F(1,74)	1
2.	Edu	17.503	F(1,73)	2
3.	Nepm	10.337	F(1,72)	3
4.	TC	7.076	F(1,71)	4

* The tests are done at 5% level of significance.

Table 5.5.2-3
Classification matrix

Actual group	Classification		Total	Percentage of cases correctly specified
	Formal trader	Informal trader		
Formal trader	34	2	38	89
Informal trader	2	36	38	95

Discriminant Analysis of Indian traders

The univariate analysis of characteristics of Indian traders has identified 13 factors. However, we drop the following five parameters--own finance (OwnFin), interest rate (Int), time taken for subsequent trade deal (TimSq), trading in same commodities (Same), number of commodities (Comm #) -- to ensure that all the discriminating variable satisfy the cut-off point of correlation ($\pm$. The logic behind dropping these variables is as follows. The variables OwnFin and Int are found to be correlated with each other and Turnover. Since Turnover is the cause type variables, we have decided to include it and exclude the other two variables. The parameters Same, Comm# are dropped since they are mutually correlated variables and are correlated with BorPr, and PreDom. The variables TC and TimSq are correlated with each other since by its nature the variable TC takes into account time element of the cost. To have consistency with rest of the study, we have decided to keep the variables TC instead of TimSq for the discriminant analysis. The `within group correlation matrix' on all the potential discriminating variables is shown below in Table 5.5.2-4. Note that none of them have correlation more than 0.4.

Table 5.5.2-4
Correlation matrix of Potential Discriminating variables

	Nepm	Turnover	Predom	Edu	Ethnic	Profit	SAFTA	TC
Nepm	1.000							
Turnover	-0.073	1.000						
Predom	0.066	-0.186	1.000					
Edu	0.183	0.282	-0.195	1.000				
Ethnic	0.142	-0.208	0.352	-0.161	1.000			
Profit	-0.015	-0.147	0.209	-0.239	0.033	1.000		
SAFTA	-0.028	-0.215	0.209	-0.147	0.377	0.319	1.000	
TC	-0.138	0.491	-0.460	0.207	-0.196	-0.317	-0.287	1.000

The following table shows the step-wise procedure and variables selected in the discriminant analysis. Out of the eight potential variables, the procedure select only the following three attributes-- transaction cost, ethnic linkage, and education level.

Table 5.5.2-5
Summary of Discriminant Analysis of Indian traders*

Steps	Discriminating variable entered	F to enter/ remove	Degrees of Freedom	No. of variables included
1.	TC	12.040	F(1,76)	1
2.	Ethnic	8.563	F(1,75)	2
3.	Edu	6.983	F(1,74)	3

* The tests are done at 5% level of significance

It can be seen from Table 5.5.2-6 that our discriminant functions are able to classify correctly nearly 74 per cent of the formal respondents and 84 per cent of the informal respondents. So, they appear to be reasonable fit to the data.

Table 5.5.2-6
Classification matrix

Actual group	Classification		Total	Percentage of cases correctly specified
	Formal trader	Informal trader		
Formal trader	29	10	39	74.00
Informal trader	6	33	39	84.00

In summary, our analysis suggests that trade related distortion is not the main cause for the continuation of informal trade. In fact, our analysis has picked up only one parameter namely, third country import, related directly to trade policy. By contrast, transaction cost, and education level, which are not directly related

to policy distortion, are found to be important attributes irrespective of the country of origin of the traders.

5.6 Summary of Findings

The survey reveals that informal traders specialise in either exporting or importing activity. Traders do not simultaneously engage in exports and imports i.e. the traders are segmented by trading activity.

The survey points to the evidence of a two-way trade. In other words, informal trade takes place both from Nepal to India and from India to Nepal. This is contrary to available evidence that Indo-Nepal informal trade is a one-way trade of third country goods from Nepal to India.

The survey results indicate that food items are traded through both formal and informal channels from India to Nepal. The commodities traded from Nepal to India differ significantly in the informal and formal channels.

Goods traded from India to Nepal are by and large procured from the neighbouring states of Bihar Uttar Pradesh and West Bengal. Goods traded informally from Nepal to India are by and large goods originating in third countries. The countries from where Nepal's sourcing of imports is carried out are - China, Japan, Thailand, Hong Kong and Singapore. An interesting finding of the study was that imports of third country goods into Nepal were largely controlled by Indian entrepreneurs residing in Nepal.

Information on the transacting environment of informal traders revealed that in both Nepal and India informal trade transactions were characterised by non-anonymous transacting i.e. firms entered into informal trading through friends or relatives.

An interesting mechanism developed by informal traders for obtaining information on goods and quantities to be traded was making personal trips across the border. The Indo-Nepal treaty allows for free movement of persons across territories. This makes personal trips a viable mechanism for information flows. The distribution network and authorised channel are the other important channels for information flows. The link with the authorised channel is established through third country imports.

An aspect crucial for informal trading is the risk associated with such transactions. The survey results point out that risk experienced by both exporters and importers is very low. The survey results were marked by the absence of frequent occurrence of any risk attribute for both exporters and importers. Further, the probability of getting caught by enforcement agencies is very low. Informal traders have developed several mechanisms to mitigate risk. Non-anonymous transacting is an important mechanism for risk mitigation. The

mechanism of obtaining information flows through personal trips again provides evidence of non-anonymous transacting. Payments to enforcement agencies in the form of bribes is also an important risk reduction strategy.

Our analysis of transacting environment of formal traders in India/Nepal indicates that inspite of Indo-Nepal free trade agreement, rent-seeking activities of authorities continue to thrive in India and Nepal. As a result, transaction costs are very much a part of the formal trade regime in India or Nepal. According to traders' perception, the main sources of transaction cost are due to delays due to miscellaneous procedures, transportation, banks, and custom authorities. It is interesting to point out that traders in both the countries consider transaction cost for obtaining licenses (export/import) a small part of their turnover.

The survey results on trading costs incurred by both informal and formal traders show that the transaction costs of trading through the formal channel are higher than the costs of trading through the informal channel. Since traders are essentially faced with the option of trading through two alternative institutional arrangements- in the present context the informal and formal channel, the arrangement with lower transaction costs would be preferred. The survey reveals that the size of firms is smaller in the informal channel than in the formal channel. Higher transactions costs of trading through the formal channel may dissuade small firms from trading through the formal channel.

Information on the perceptions of informal traders on factors influencing informal trade flows gave further insights into the relative importance of policy related factors and institutional factors. Trading in third country goods was the most important factor influencing informal trade flows from Nepal to India. Other important factors were no paperwork, lower bribes and quick realisation of payments in the informal channel. Institutional factors giving rise to transactions costs were considered important in determining trade flows from India to Nepal. The important factors were - no paperwork, quick realisation of payments, no procedural delays and lower transportation costs in the informal channel. The lower education level of informal traders would also deter informal traders from using the formal channel. The survey does not point to any evidence of leakage of administered priced goods from the Public Distribution System in India.

The common attributes of formal and informal traders engaged in Indo-Nepal are analysed in a comprehensive manner first by univariate Wilcoxon sign-rank test and then by step-wise discriminant function to control for possible mutual interaction. Like in the analysis of Indo-Bangladesh informal trade, the multivariate technique is used to identify the characteristics that in combination differentiate formal traders from informal traders. The analysis identifies for the Nepalese traders the following four discriminating characteristics: size of the firm, education level of traders, transaction cost of trading and third country imports. By contrast, transaction cost of trading, ethnic linkage of traders and their

education levels are the differentiating characteristics of the Indian formal traders from their informal counterpart.

It is reasonable to surmise that even with a rapid pace of liberalisation set by the free trade agreement informal trade continues to thrive. However since trade from Nepal to India takes place largely in third country goods, with lowering and equalisation of tariff walls, the source of such trade would disappear. Informal trade from Nepal to India in goods other than third country goods is likely to continue. On the other hand informal trade from India to Nepal is taking place in locally produced goods. Clearly then such trade will continue to take place through informal channels.

Interestingly, when informal traders were asked whether reduction in tariffs and non-tariff barriers would lead to a decline in informal trade flows, 92% of the informal traders in Nepal and India opined that informal trade would increase in the future.

Conclusion

Formal trade in South Asia continues to be quite low despite continuous efforts by these economies to enhance trade. In the 1990s, the countries of South have launched trade policy reforms unilaterally and multilaterally under the auspices of the WTO. The South Asian countries have also taken a major initiative in 1991 towards greater regional economic co-operation by establishing a SAARC Preferential Trading Arrangement. Since then three rounds of South Asian Preferential Trading Arrangements (SAPTA) have been concluded and 3152 commodities and 47 sectors at the two digit levels have been offered for concessions. The member countries have also envisaged the formation of a South Asian Free Trading Arrangement (SAFTA) by 2001. Even though this indicates a progress towards a sectoral approach, the trade coverage of these sectors remains very low. This raises strong doubts about the progress in trade liberalisation in the SAARC region. By contrast, informal trade between the SAARC countries is believed to be at least as much as formal trade. In fact, some of the informal trade across borders of SAARC countries predates not only formal trading arrangements but also the formation of present day national boundaries. In this context, our study focuses on India's informal trade with Bangladesh and Nepal to understand important institutional aspects underlying informal and formal trade. The study is based on extensive primary surveys conducted in India, Bangladesh and Nepal. The survey results were used to understand the nature of transacting environment of formal and informal traders, the relative importance of institutional factors *vis-à-vis* those arising out of trade and domestic policy distortions in influencing informal trade flows and the discriminating characteristics of participants in informal and formal trading. In sum, one could make several tentative conclusions.

The informal trade between India and Bangladesh is essentially a one way trade flow from India to Bangladesh. By contrast, we find that there is a two-way informal trade between India and Nepal.

The survey reveals that in the absence of formal contracts between trading partners, the informal trading arrangements were characterised by non-anonymous transacting in both Indo-Bangladesh and Indo-Nepal informal trade The survey results indicate that extent in risk for both exporters and importers is low in both the case studies explaining the low probability of getting caught due to seizure. The informal traders make low payments to enforcement agencies to mitigate risk.

The survey reveals that a large proportion of goods traded from India to Bangladesh are procured from other states in India. By contrast, goods traded from India to Nepal are procured from neighbouring Indian states bordering Nepal. Also, the survey provides evidence of leakage of PDS goods (in the form of informal trade) from India to Bangladesh. This phenomenon was absent in the case of Indo-Nepal informal trade. A related aspect in the sourcing of goods that was probed into was whether there was a significant trade in third country goods. While this form of trade is absent between India and Bangladesh, it is the most predominant form of informal trade flow from Nepal to India.

Our analysis of transacting environment of formal trade in India/Bangladesh and India/Nepal indicates that the inefficiencies of the trade regimes give rise to rent seeking activities of concerned authorities. This is true even in case of Indo-Nepal formal trade despite considerable trade liberalisation under the bilateral free-trade agreement. An interesting feature that emerged was that formal traders preferred to use mechanisms of informal trading to settle disputes either mutually or through traders/business associations. In Bangladesh, the formal traders used their ethnic ties to resolve disputes arising out of violation of contractual agreement.

The hypothesis posed in the study was that traders would opt for the informal channel if transaction costs of operating through informal channel are lower than the formal channel. The survey reveals that the transaction costs in the informal channel are significantly lower than the formal channel in both the countries. This aspect was further highlighted when informal traders were asked about why they opted for the informal channel. The survey revealed that institutional factors viz., quick realisation of payments, no paper work, no procedural delays and lower transportation costs) were instrumental in driving the traders towards informal channel. However a large proportion of informal trade flows from Nepal to India is in goods imported from third countries, influenced by import tariff (with the rest of the world) differential between India and Nepal. Perhaps what does get highlighted from the survey is that trade policy barriers like tariffs and quantitative restrictions between the countries under study were not considered as important as institutional factors. The other reasons for the preference of informal channel

could be the lower size of informal trading firms, lower level of education, and lack of awareness of trade rules among the informal traders.

The common attributes between formal and informal traders were analysed in a comprehensive manner by step-wise discriminant analysis. It is used to examine whether informal traders differ from formal, and if so, in terms of which characteristics. The analysis of discriminating characteristics of formal and informal traders in India/ Nepal and India /Bangladesh indicates that transaction cost is the only common discriminating factor. The other important discriminating characteristics between informal and formal trade in India/Bangladesh are the type of commodity traded and level of education of traders. By contrast, in addition to transaction cost, the other discriminating characteristics between informal and formal trade in India/Nepal are size of the firm, education levels of traders and ethnic ties.

It is expected that trade liberalisation will simplify procedural complexities leading to decline in rent-seeking activities of government officials. On the contrary, we find that that the bribes had increased in the last five years. The traders have noted that the corruption had become pervasive over time.

The main policy implication from the study is that unless the transacting environment of formal traders improves, informal trade will continue to coexist with formal trade, even iSf free trade is established in the SAARC region.

APPENDIX

Table A-1 Informal Trade from India to Bangladesh

Food	#	Primary Commodities	#	Textiles	#	Consumer Goods	#	Machinery	#	Other	#
Apple	4	Cement	1	Fabric	9	Sugar	28	bicycle & parts	9	Filament	1
Onion	29	Pesticides	1	Blouses	1	Medicine	4	machinery part	3	electrical part	1
Rice	24	Iron	1	Saree	22	Salt	18	Cycle Parts	2	Corrugated Sheet	1
Wheat	3	diesel	1	Bed Sheet	4	Kerosene	9	Cycle	9		
Garlic	4			Garments	11	Phensydil	16	Motor Parts	2		
Haldi	3			Cutpiece	1	Staionary good	1	Electronic Machines	1		
Egg	5			Cotton Saree	2	Baby food	4	T.V.& Radio Parts	1		
Zira	2			Printed Sari	3	Mritasanjibani suda	1	Electronics	2		
Dal	6			Cotton Cloth	4	Plastic item	1				
Soyabin Dust	1			Warm Cloth	1	Milk powder	2				
Fish	1			Shawl	1	Soaps & Cosmetics	5				
Potatoes	4					Oil	1				
Pulses	5					Sugar	15				
Fruit	6					Blade	4				
Vegetables	1					Ganja	2				
Cow	9					Jarda	2				
						Match	1				
						Needle	2				

Note: Figures represents number of respondents against each product category.

Table A-2 Formal Trade from India to Bangladesh

Food:	#	Primary commodities	#	Textile:	#	Consumer Goods	#	Machinery	#	Other	#
Rice	58	Seed	2	Jute	1	Sugar	3	Machine tools	1	Caustic Soda	1
Pulses	22	Black stone	1	Raw jute	1	Decoration flower	1	Bicycle & parts	1		
Turmeric	2	Marble chips	4	Silk yarn	2	Ball pen	1	Engineering goods	1		
Garlic	9	Pig iron	1	Cotton yarn	3	Plastic bag	1	Cycle Parts	3		
Wheat	6	China clay	1	Fabric	4	Leather goods	1	Motor Cycles	1		
Other Cereals	1	Coal	8	Yarn	1	Leather bags	1	Motor Parts	3		
Tea	1	Stone Chips	13	Garments	1	Tobacco	1	Chesis	1		
Fruits	10	Sand Stone	1	Cotton Sari	2	Cotton bags	1	Electrical Parts	2		
Fish	3	Poultry Feed	1	Cotton Cloth	2	Stationery Items	1	Electrical Goods	2		
Vegetables	3	Casting Material	1	Synthetic Cloth	3	Soyabin Oil	1	Truck Chesis	2		
Mustard	1	Gypsum	4			Sugar	2	Motor Cycle parts	2		
Molasses	2	Coal	13			Bin Extract	1				
Onion	16	Stone	19			Salt	2				
Spices	1	Cement	15			Blade	1				
Apple	4	Pesticides	0			Plastic Items	1				
Orange	8										
Grapes	4										
Haldi	2										
Dal	1										
Corn	2										
Pineapple	1										
Mango	5										
Potatoes	2										
Gram	1										
Tomato	1										

Note: Figures represents number of respondents against each product category

Table A-3 Informal Trade from India to Nepal

Food	#	Primary	#	Textiles	#	Electronics	#	Consumer	#	Machinery	#	Others	#
Wheat	5	Coal	2	Garment	8	VCR/VCP	1	Cosmetics	6	Engineering part			
Pulses	7	Cement	1	Fabric	7			Lock & Key	1	Motor part	2		
Potatoes	4	Fertilizer	2	Saree	5			Stationary good	2	Electric good	1		
Onion	3			Raw jute	1			Washing cake	1	Electric cable	1		
Rice	12							Washing powder	1				
Jeera	1							Jam	1				
Peeper	1							Baby Food	2				
Molasses	2							Salt	5				
Cattle	1							Pressure Cooker	2				
Vegetable	2							Stoves	2				
Spices	1							Soap	1				
Sugarcane	1							Medicines	3				
Tomato	1							Cooking Oil	1				
Goats	1							Bulb	1				
Hens	1												

Note: Figures represents number of respondents against each product category

Table A-4 Informal Trade from Nepal to India

Food	#	Primary	#	Textiles	#	Electronics	#	Consumer	#	Machinery	#	Other	#
Nut	1	Stone Chips	1	Carpet	2	Electronic Good	13	Kitchen Item	1				
Cloves	1			Blanket	2	Music System	2	Umbrella	3				
Cardamom	1			Jeans	2	Computer Part	2	Cosmetic	2				
Cinamon	1			Jacket	6	Calculator	2	Bag	1				
Resins	1			T shirt	1			Shoes	4				
				Bed sheet	1			Lighter	1				
				Fabric	2			Sport item	1				
								Film roll	1				
								Cooking oil	1				
								Torch	2				
								Emergency Light	2				
								battery	1				

Note: Figures represents number of respondents against each product category

Table A-5 Formal Trade from India to Nepal

Food	#	Primary	#	Textiles	#	Electronics	#	Consumer	#	Machinery	#	Other	#
Molasses	1	Animal Feed	1	Raw Jute	3			Sugar	1	Tyre & part	3	caustic soda	1
Potatoes	12	Sun mica	1	Garment	8			Biscuit	6	Motor part	10	bleaching powder	1
Vegetable	9	Glass	2	Fabric	1			Soap	7	Machinery	7	chemical	1
Rice	13	Cement	6	Yarn	1			Glass Bottle	1	Motor cycle	1	surgical good	1
Tea	10	Raw plastic	3					Glass Plate	1	Tractor	1	packaging material	1
Molases	4	Ply wood	1					Glass Pots	1			sanitary equipment	1
Wheat	6	Seed	1					Printing Ink	2				
Goat	2							Ceramic Cup	1				
Cofee	2							Cosmetic	2				
Coconut	4							Lantern	1				
Jeera	1							Battery	1				
Dhania	1							Torch	1				
Chillies	1							Glucose	1				
Spices	1							Medicine	1				
Onion	2												

Note: Figures represents number of respondents against each product category

Table A-6 Formal Trade from Nepal to India

Food	#	Primary	#	Textiles	#	Electronics	Consumer	#	Machinery	#	Other	#
Suji	1	Animal Feed	4	Jute Bag	3		Plastic Item	7	Spare Part	1	Water Tank	1
Cereals	1	Iron Scrap	5	Garment	1		Melamine	1				
Food	1	Ply Wood	1	Jute	2		Flower	1				
Mustard cake	8	Gci Sheet	1				Dry cell Battery	1				
Ginger	7						Soap & Detergent	6				
Ritha	4						medicinal plant	9				
Katha	2						mustard oil	6				
Wheat	1						black board	1				
Pulses	4						paper	1				
							shoes	1				

Note: Figures represents number of respondents against each product category

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