

Final Report

Private Sector Cross-Border Trade Between Afghanistan and Pakistan Phase II

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PREFACE

This report was prepared as Delivery Order No. 7 of A.I.C. Contract No. 306-0205-C-00-9385-00, the Afghanistan Studies Project, a joint venture between Nathan Associates Inc. and Louis Berger International, Inc., with Atlas Associates, Inc. as subcontractor. The survey and analysis reported here were carried out from December 1989 through May 1990 by a five-person team of economists and survey specialists from these three firms, in addition to a team of enumerators from the Swedish Committee for Afghanistan. The expatriate team consisted of Dr. John Newton, team leader; Dr. Edgar Ariza-Niño, marketing economist; Dr. Barton Sensenig, survey specialist; Mr. Gerard Sequeira, statistical analyst; and Mr. Robert Manly, survey advisor. The team benefited especially from the participation of Mr. Robert R. Nathan who served as senior advisor and project officer. Mr. Harvey Lerner served as contract coordinator.

The research team would like to thank Mr. Larry Crandall and Mr. John Miller, the A.I.D. representative and deputy representative, respectively, of O/AID/Rep/Afghanistan, and their staff for their cooperation during the course of this study. Dr. Curt Wolters, who served as Officer in Charge for this Delivery Order, and Mr. Val Mahan, the Project Officer for the full contract, were especially helpful. Special thanks are due the representatives of the Afghan and Pakistani private sectors who agreed to be interviewed for this report, many of whom are listed in Appendix C.

Although the Swedish Committee for Afghanistan (SCA) was not a formal partner to this contract, the Agricultural Survey of Afghanistan (ASA), a division of the SCA, graciously allowed the research team to borrow a full team of experienced Afghan enumerators for the project. Dr. Azam Gul, director of ASA, and Mr. Qaseem Panjsheri, team supervisor, were extremely helpful during the survey, lending their surveying, supervisory, and linguistic skills to the project effort. The interviewers who carried out the survey in Afghanistan were Mohammed Afzal, Rahim Shah, Mohammed Gul, Gul Babri, Mohammed Farooq, Abdul Wahab, Abdul Wadood, Abdul Saboor, Sultan Mohammed, Zia-ul-Din, and Akhtar Mohammed.

GLOSSARY

ADB	Asian Development Bank
afghani	Unit of Afghan currency. "Bazaar rate": Afs. 510 = US \$1.00 as of end-February 1990
ALD.	U.S. Agency for International Development
AIG	Afghan Interim Government
Bill of Exchange	A negotiable order to pay a fixed sum of money, usually in foreign currency, written by a first party (the drawer) to a second party (the drawee) for payment to a third party (the payee)
CPI	Consumer Price Index
CSO	Central Statistics Office of the GOA
EXAP	Exporters of goods from Afghanistan to Pakistan
EXPA	Exporters of goods from Pakistan to Afghanistan
FAO	UN Food and Agriculture Organization
FATA	Federally Administered Tribal Areas
GDP	Gross Domestic Product
GOA	Government of Afghanistan
GNP	Gross National Product
GOP	Government of Pakistan

IMAP	Importers of goods from Afghanistan to Pakistan
IMF	International Monetary Fund
IMPA jerib	Importers of goods from Pakistan to Afghanistan Afghan unit of land area, equal to 44m x 44m or 1,936 m², usually rounded to 2,000 m²
LBI	Louis Berger International, Inc.
NGO	Nongovernmental Organization
O/AID/Rep	Office of A.I.D. Representative for Afghanistan Affairs
PVO	Private Voluntary Organization
rupee	Unit of Pakistani Currency. Official exchange rate: Rs 215 = US \$1.00 as of end-June 1989
NAI	Nathan Associates Inc.
seer	Afghan unit of weight equal to approximately 7.08 kilograms, usually rounded to 7 kilograms
SITC	Standard International Trade Classification
TRAP	Transporters of goods from Afghanistan to Pakistan
TRPA	Transporters of goods from Pakistan to Afghanistan
UN	United Nations
UNDP	United Nations Development Program
UNHCR	United Nations High Commissioner for Refugees
UNICEF	UN Children's Fund
UNLOG	UN Logistics Agency
USDA	U.S. Department of Agriculture
WFP	UN World Food Program

Chapter 1

INTRODUCTION AND EXECUTIVE SUMMARY

This report presents the results of the second phase of a two-phase study of cross-border trade between Afghanistan and Pakistan. Building on the results of the first study, it is intended to extend the analysis of cross-border trade in selected commodities by specifying the current volumes of and capacities for such trade and by identifying the determinants of prices and delivery costs for those commodities imported into Afghanistan. The major data source for this analysis is a cross-border survey carried out largely in Afghanistan by Afghan interviewers, which is described in Chapter 2 of this report. Chapter 3 describes complementary surveys carried out in Pakistan by the expatriate members of the team. In Chapter 4 we present a brief retrospective analysis of foodgrain needs, estimating the imports of grain into Afghanistan during 1989 by comparing consumption needs with grain production under alternative assumptions. In Chapter 5, we combine the results of all the surveys to estimate the total volume of trade in selected commodities during 1989 along common routes between the two countries. Chapter 6 is a market analysis based on the combined survey results, intended to measure the determinants of prices of target commodities in Afghan markets and to measure the price elasticity of demand in a preliminary manner. Finally, in Chapter 7 we integrate our findings with those of our earlier report.

As the second phase of a larger study, this report does not include a statement of project background or a restatement of the results and conclusions of the first phase. Although the present analysis is complete in itself and includes a full set of its own conclusions, readers would be well served to review the background and conclusions of the first report.¹

¹ See "Profile of Private Sector Cross-Border Trade Between Afghanistan and Pakistan: Phase I," Delivery Order No. 2, 1989.

The remainder of this introductory chapter consists of a more detailed description of the objectives of the study, a brief outline of the methodologies employed, and a summary of the results of the project.

Objectives

The objectives of the Phase II Cross-Border Trade Study are best understood in the context of the current program of the Office of the A.I.D. Representative for Afghanistan Affairs (O/AID/Rep), which emphasizes cross-border humanitarian programs and commercialization of aid. Both these program elements require the use of private sector import and export facilities for their implementation, so O/AID/Rep needs to know the capacities of and costs of these facilities. In addition, commercialization efforts require not only institutional information on the markets involved but pricing and costing analyses as well. The objectives of our Phase II study are relevant in both cases. First, the target commodities for the study, listed immediately below, are those most likely to play a part in relief and resettlement efforts and in commercialization of aid.

- Basic food products, especially wheat;
- Other agricultural products, including unfinished products likely to be exported from Afghanistan;
- Agricultural inputs, including equipment, seed, and fertilizer;
- Fuels, especially those likely to be used by rural residents and returning refugees; and
- Construction materials, including materials used in Afghanistan for reconstruction as well as raw materials exported from Afghanistan.

Second, in the same program context, the analysis of the import and export of these target commodities between Afghanistan and Pakistan is to be directed at those market issues most important to relief and commercialization efforts, as follows.

- **Current Volume of Trade.** Imports of selected products into Afghanistan are an indicator of relief needs and of the effectiveness of the current commercial system for meeting those needs. The extent of exports from Afghanistan may indicate the

limits of domestic productive capacity to acquire foreign exchange for meeting import needs.

- **Capacity of the Trading System.** If O/AID/Rep is to use the current cross-border commercial system for supplying aid, it must do so with an understanding of limits to this private sector capacity, including the capacities of the transport and financial systems.
- **Price Determination and Price Sensitivity.** To price relief products and determine the spending power (if any) that must be transferred to enable purchases, A.I.D. must know both current prices inside Afghanistan and how they are likely to change in the foreseeable future.
- **Implicit Demand for Target Commodities.** Whereas trade volume may indicate the effective demand for relief-relevant commodities inside Afghanistan, unmet demands, equally relevant to the O/AID/Rep program, may be measured indirectly through demographic and domestic production analyses.

Both the target commodities and the market issues which define the objectives of this study are those of most importance to O/AID/Rep's humanitarian and commercialization programs.

Summary of Methodology

To meet these objectives, the Cross-Border Trade Project relied largely on interview data because most official trade data and related statistics are unreliable in the context of unofficial, often illegal, trade. A full explanation of the interview methodology and instruments employed is presented in Appendix A, and the implementation of that methodology is detailed in Chapter 2. The basic elements of our approach were as follows.

Purposive Interviews. On the basis of our experience during the Phase I study, we chose the purposive approach to the selection of interviewees—that is, we directed our enumerators to interview the most prominent and presumably most knowledgeable traders in various categories. This approach yielded consistent and reliable results during Phase I of the study and, in addition, has the appeal of simplicity and economy of survey design. A more extensive formal sample survey would be an

interesting long-term project for an Afghan development program, but was not justified for the current project either in terms of cost or O/AID/Rep program objectives.

Route Groups. We chose to classify trade flows between Afghanistan and Pakistan in terms of the routes over which they are transported rather than by destination. Many traders and transporters interviewed are unaware of the final destinations of the products in which they deal, but they do know by which routes products are sent across the border to their intermediate destinations. The next step—classifying the individual border crossing routes into four major groups—was an analytical necessity because the number of trade routes between the two countries has proliferated in recent years.

Emphasis on Unofficial Trade. Most trade in the commodities chosen for this study is illegal or restricted under either Pakistani or Afghan law, so the project emphasized unofficial trade channels, including outright smuggling and undocumented trade. The Government of Pakistan (GOP) may recognize these activities and even condone them semi-officially as a necessary means of providing war-time humanitarian assistance to citizens of a neighboring country. We included official trade data in our estimates of total trade volume, but the cross-border survey itself was directed largely at unofficial trade.

Inclusion of Relief Shipments. Although the project was concerned primarily with private sector trade, the provision of relief commodities by nongovernmental organizations (NGOs) and international relief agencies, including AID, is often carried out partly through private enterprise channels. In addition, many of the traders and transporters interviewed could not distinguish between private, public, and NGO shipments at every stage. We therefore attempted to capture relief shipments in the survey itself and, in any event, to include such shipments in our final estimates of total trade.

Food Needs Analysis. As a complement to our interview-based estimates, we included a calculation of total Afghan foodgrain needs, coupled with estimates of domestic grain production by region, allowing the estimation of food imports in turn as a residual. This analysis was taken from a more extensive food needs study performed² as a separate delivery order under the Afghan Studies Project.²

² See "Afghanistan Regional Foodgrain Trade and Needs Analysis," Delivery Order No. 10, 1990.

Summary of Results

This executive summary follows the order of the chapters of the full report. It concentrates on the substantive results of the study as opposed to procedure, methodology, and implementation, which are treated in more detail in the text of the report.

Cross-Border Survey

The Afghan survey team interviewed three classifications of traders on each side of the border: exporters, importers, and transporters trading into and out of Afghanistan. The raw data from these interviews is directly usable to some extent, although the standard deviations of certain observations are high. After a few statistical adjustments, the basic results are as follows.

- The total volume of unofficial trade flowing from Pakistan into Afghanistan was within the range estimated during our Phase I study in June 1989. Our estimate then was that the total flow over all routes was about 100-140 ten-ton trucks per day—equivalent to about 312,000 to 427,000 metric tons per year, assuming a 6-day week. Our current initial data indicate that the 1989 annual level was about 412,000 tons.
- For exports from Afghanistan to Pakistan, the adjusted observations of trade flows in traditional items (dried fruit, temperate vegetables, and hides) were consistent with Phase I estimates, at 78,000 metric tons. However, several products not included in the commodity list for the earlier report appeared to be of major importance. Exports of lumber (not a target commodity for Phase I) outweighed food exports by a substantial margin and were estimated at 439,000 metric tons in 1989. Altogether, the observed exports of Phase II target commodities from Afghanistan to Pakistan were 527,000 metric tons.
- Transportation costs are a major component of product prices inside Afghanistan. Most of the price differentials among provincial markets can be explained by distances from the major market centers of Peshawar, Quetta, and Kabul.

- To some extent transportation costs include general transaction costs, such as "tips and taxes" paid to various authorities along the routes. The quantitative survey results did not indicate a major "tips and taxes" component, although the non-quantitative interview responses did. The conflicting results may be due to response bias on the part of interviewees asked to go on record concerning payment of bribes.
- Among the target commodities, wheat flour, as opposed to wheat grain, is the more important product for certain regions. Reportedly, the rural areas to which Pakistan exports are destined lack milling facilities, and most existing mills are in Government of Afghanistan hands.

Pakistan Surveys

While the Afghan survey team carried out interviews inside Afghanistan, the expatriate team interviewed Pakistani and Afghan traders inside Pakistan and conducted a survey of NGOs participating in cross-border transfers of commodities. The conclusions of these surveys are as follows.

- Inter-regional trade in Afghanistan is quite difficult and is low relative to levels as recent as 1 year ago. A quantitative comparison was impossible with our interview results, but respondents indicated such a falloff in trade and quoted transport costs (especially in the northern provinces) at prohibitive levels. Both NGO officials and some (but not all) Afghan traders confirmed this observation.
- Localized shortages and substantial price hikes have resulted from this situation, despite generally sufficient grain supplies (including imports) inside Afghanistan. Some respondents quoted wheat prices in the northern provinces at levels two to three times the current Kabul price.
- Crop conditions deteriorated in the past two crop cycles (1988/89 and 1989-90). Sunnpest, locust, and drought have damaged the winter wheat crop in the northern provinces, and production shortfalls may develop by late summer 1990.

- These combined factors could lead to a change in the previous pattern of generally sufficient imported and locally grown wheat in Afghanistan. Imports might not reach affected areas, and domestic production might be available in reduced quantities.

These observations are based on second-hand reports, not surveys carried out by our own enumerators (who could not visit the areas indicated). The NGO officials and traders we interviewed based their statements on phenomena they had observed, but their methods of observation or reporting may differ from those employed in formal surveys. The following conclusions, however, are supported by the formal survey results as well.

- The structure of the Pakistani-Afghan export market is changing in terms of both geography and participation, perhaps due to the closing of the main Torkham route during the siege of Jalalabad beginning in October 1988. Although this conclusion may result from sampling differences between our Phase I interviews and the current survey, the following two trends seem to be supported by both our Peshawar interviews and the formal survey responses.
 - **Geographical Change.** Many Pakistani exporters now bypass Peshawar altogether, sending goods directly to Parachinar or Wana. Markets in those areas are now as large as those in Peshawar, and our enumerators indicated that most traders are now found at these border markets.
 - **Structural Change.** Geographical shifts in Pakistani export markets, as well as the return of Afghan refugees, may have brought about changes in the type and size of market participants. More small traders and more Afghans now tend to be involved in cross-border trade, even that trade originating far inside Pakistan. This observation may be biased by the fact that our enumerators were Afghans and were more familiar with small Afghan traders, but the interviews carried out by the expatriate team confirmed this conclusion.

Other conclusions from the Peshawar-area surveys relate strictly to the operations of the NGOs and public sector agencies and contractors.

- During January 1989, NGOs and other Afghanistan-oriented agencies and contractors operating out of Peshawar were reluctant to release information on their cross-border activities in Afghanistan because they were experiencing difficulties with the Government of Pakistan at the time our interviews were being conducted. The statistics quoted in this report are complete only for the three most active NGO shippers of target commodities. We estimated the remaining shipments on the basis of surveys by the Agency Coordinating Body for Afghan Relief (ACBAR).
- NGO shipments of commodities of interest for this study were quite low in comparison to A.I.D. and private sector shipments. For example, most of the wheat shipped by NGOs was donated by the UN World Food Program (WFP) and amounted to only 8,800 metric tons during 1989. Together the NGOs and the UN shipped only about 10,000 metric tons of food during 1989, compared to about 90,000 tons by A.I.D.
- NGOs shipped much more agricultural production material than other agencies, amounting to some 65,000 tons during 1989. These materials consisted of seed, fertilizer, tractors and related equipment, tools, and draft animals.

Preliminary Foodgrain Balance Assessment

Given the problems with interview-based estimates of an illegal activity, we found it useful to compare our interview results with an alternative method of estimating cross-border trade in one of our target commodities. Using separate regional estimates of population and of consumption and production of wheat inside Afghanistan, we projected import requirements by region. Dr. Thomas Eighmy of O/AID/Rep has produced new estimates of population, by district, for Afghanistan, corrected for the effects of refugee outflow and nomadic population movements. Similarly, the Swedish Committee for Afghanistan (SCA) has produced estimates of past and current crop yields, which can be used to approximate production levels. (See the Bibliography for full citations.) Those data produce the following estimates.

- The total in-country population of Afghanistan can be estimated at *12,106,000* at mid-year 1989, about 2 percent below the Eighmy estimate for 1990. If annual per capita wheat consumption were *180 kilograms* (above the standard UN allotment of 150 kilograms but below the pre-war Afghan level of 220 kilograms, then total consumption of wheat inside Afghanistan would be *2.179 million metric tons*. If production in Afghanistan were *1.788 million metric tons* during 1989 (which is at the high end of the total production that SCA officials are willing to estimate informally based on their yield data), then the total shortfall would be *391,000 metric tons*. The shortfall would have to be replaced by imports.
- If annual per capita consumption of wheat were at the pre-war level of *220 kilograms*,³ then total consumption would be *2.663 million metric tons*. If total production were still *1.788 million metric tons*, then the total shortfall would be *875,000 metric tons*, which again would have to be made up by imports.
- A similar result would obtain if per capita consumption were left at *180 kilograms* and total production were assumed to be *1.4 million metric tons*—the low end of SCA informal estimates. The total shortfall in this case would be *779,000 metric tons*.
- In the worst case, if per capita consumption were at the pre-war level and total production were at the SCA low-end level, then the total shortfall would be *1.263 million metric tons*.

These calculations are only indicative because they are based on prior estimates which are themselves uncertain. Nevertheless, they do indicate the plausible range of actual wheat imports, and they set out the basic assumptions on which broad estimates must be based. Moreover, compar-

³ Although prewar statistical sources are unclear on this point, this level of consumption may include production-related waste, so that actual human consumption would be lower than 220 kilograms. In that case, estimates of current production levels, which are based on prewar levels, should also be interpreted to include waste and should therefore be higher than the minimum subsistence level of 150 kilograms.

isons of the regional breakdown of deficit and surplus areas lead to an important conclusion.

- No matter what the level of current Afghan domestic wheat production, the traditionally deficit areas (see Tables 4-1 through 4-3) will continue to generate a deficit of approximately 400,000 metric tons. This amount is equal to the minimum deficit level produced by our other estimation methods.

In other words, given the problems of inter-regional transport in Afghanistan, certain provinces (largely those near Pakistan) will continue to require imports at any reasonably foreseeable level of national production.

Even with these tentative calculations, at least one general conclusion is evident. Within any reasonable range of total production and import estimates, the in-country population of Afghanistan is in a precarious food balance situation. Consumption levels much above subsistence, let alone near pre-war levels, are highly unlikely to be supplied. Even small changes in production could push certain regions over the edge of subsistence into serious shortages.

Total Trade Volume

This component of the study combined the estimates of informal trade and public sector and NGO shipments with official data on legal trade, arriving at global estimates of cross-border transfers. Government of Pakistan data for official trade with Afghanistan are available for 1989 and indicate a significant decline in both exports and imports of our target commodities, to about one-tenth the 1988 level reported during Phase I. Converting the values to weight equivalents to compare them with unofficial trade increased the total only slightly. The full volume of shipments from Pakistan to Afghanistan during 1989 was estimated at 544 thousand metric tons, of which 412 thousand tons were unofficial private sector trade.

Price and Market Analysis

Preliminary results of the survey data revealed that prices of wheat flour and other commodities were higher in those areas farther from the Pakistan border or otherwise less accessible to it. Overall, the highest prices were found in Wardak province, while the lowest occurred in Kunar. Wheat flour, for example, was 368 rupees per 100 kilograms in Kunar Province, while in Wardak it was reported at 809 rupees per 100 kilograms. The price in Pakistan itself varied between 280 and 400 rupees per 100 kilograms, depending on quality. Prices in Paktia were also lower in relation to those

in Logar, another province supplied from Pakistan along the Parachinar route.

Transport costs collected by the survey enumerators showed a close association with distance and difficulty of the route. The Parachinar route becomes especially difficult during winter months, while the Wana route is reportedly easier in those months, and becomes the preferred route to reach Wardak. Transport costs of 211 rupees per 100 kilograms were reported for Wardak, compared with only 89 rupees per 100 kilograms for Kunar (see Table 4-4). However, Paktika, a province that borders on Pakistan, reported very high transport costs, as well as high prices. This may be explained by the inaccessibility of the province from well-established markets in Pakistan and, therefore, heavy transport costs within Pakistan. Transport costs appear to be a principal factor in determining price differences among provinces. Moreover, initial examination of the survey results indicated a much lower level of payments by importers for official or unofficial levies in transit. This observation contrasted with the frequent complaint from transporters of high charges from local commanders at roadblocks.

A close correspondence between price levels and transport costs is compatible with the working of a relatively competitive market. It also agrees with the finding that many of the importers surveyed had high-value commodities such as sugar, rice, and cooking oil. The prevalence of small-scale importers among the survey respondents, and the small size and wide dispersion of markets in provinces covered, also indicate a competitive market. There was little indication that on the Afghan side of the border the import and distribution of food products was concentrated in the hands of a few large operators. Finally, the following summary observations apply.

- Market prices for the target commodities inside Afghanistan (notably wheat) are such that it is barely profitable to ship those commodities from Pakistan. Small changes in transport cost or source prices can greatly affect the private sector incentive for trade.
- Price sensitivity of wheat in Afghanistan is high. That is, demand (and probably supply) tends to respond relatively strongly to small changes in price. Our subsequent analysis will determine this measurement more precisely; the major point of interest for now is that O/AID/Rep will have to carefully plan the pricing of any commercialized aid to Afghanistan.

Integration With Prior Results

The conclusions of the Phase II study are consistent with those of Phase I, though the current study has revealed new trends not evident in June 1989. The conclusions the two studies have in common are as follows.

- Most trade between Afghanistan and Pakistan in the target commodities for this study is unofficial—that is, illegal in either Afghanistan or Pakistan. The total volume of unofficial trade far outweighs that of recorded official trade.
- The major constraint on the expansion of cross-border trade is the transport system, broadly defined to include both the physical infrastructure and war-related constraints on free movement of goods.
- Traders nearly universally state that the major components of the trading system—the financial mechanisms, the agent network, the pricing structures, and the set of relationships between importers and exporters—are capable of sustaining any foreseeable increase in trade, with one exception: the transport system. They refer to the physical state of the roads and the serious restrictions on the free circulation of vehicles as impediments to the increased trade expected to come about with the repatriation of Afghan refugees.

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Chapter 2

CROSS-BORDER SURVEY

In this chapter we describe the approach, implementation, and initial results of the cross-border trade survey that provided the greater part of the statistical data on which this report is based. Only the initial results and statistical adjustments are presented here. The analysis of these results and their integration into an overall estimate of cross-border trade volume are the subjects of later chapters.

This survey was designed to gather from within Afghanistan basic data on price, cost, and trade volume for certain commodities,⁴ along with comparable data from Pakistan, using methodology developed during Phase I of the study. Survey teams were deployed along routes and in markets much the same as in that first phase, with instructions to target specific classes of traders presumed to generally be knowledgeable of cross-border markets. The raw data from their interviews reveal trade tendencies and volumes consistent with our earlier findings, although the variances of observations are high in some instances. The following sections treat each of these issues.

Approach

During the first weeks of Phase II research (early December 1989), the expatriate team selected target regions, markets, and trade routes for the survey and contracted with a group of Afghan enumerators for the cross-border survey. Many of these decisions were based on Phase I research and on O/AID/Rep objectives and needs in the food security area.

⁴ The target commodities for the Phase II survey are all products in the five general categories of (1) food, (2) other agricultural products, (3) agricultural inputs, (4) fuel, and (5) construction materials. The last category was not included in Phase I. For a complete list of individual products in these categories, see Appendix A.

The Survey Team

After interviewing several individuals and groups who had performed statistical surveys inside Afghanistan and in the border area, the Phase II team was introduced by Dr. Azam Gul, of the Swedish Committee for Afghanistan (SCA), to a group of enumerators who had worked for approximately 2 years with the SCA's Agricultural Survey of Afghanistan (ASA). These experienced field enumerators possessed degrees from Afghan agricultural universities, extensive contacts inside Afghanistan, and clearance from relevant Afghan Mujahidiin Commanders, allowing them to work unhindered inside the country. These qualities, along with their well-developed understanding of the problems associated with interview-based collection of statistical data, made the ASA survey team clearly the superior candidates for the job. They were contracted and began their instruction immediately, under the supervision of Mr. Qaseem Panjsheri and the overall guidance of Dr. Azam Gul.

Working and training directly with the expatriate team, these enumerators were of significant help in developing and refining the approach to the cross-border survey.

Route Groups and Regions

By various counts and definitions, there are from 22 to 240 separate trade routes across the Afghanistan-Pakistan border, although only two pass official customs posts (at Torkham and at Chaman). The number of active routes and the use of secondary and unofficial routes has increased greatly, since the beginning of the war. Attempting to survey so many routes directly, or even to ask survey questions about all of them would be a costly statistical undertaking and of dubious effectiveness. Some systematic and commonly recognizable classification of these routes was necessary to collect interview data on their use. The method chosen by the Phase II research team was to divide the route system into *route groups* according to common origins in Pakistani staging areas and destinations in Afghan market regions. The Phase I team had identified three groups of cross-border trade routes, based on the manner in which most interviewees described the trading system. Modifying that classification to include consideration of selected target regions produced a somewhat similar aggregation of four route groups.

Given the O/AID/Rep objective of improving food security in the context of the prospective resettlement of Afghan refugees, the Afghan regions of greatest importance to this survey are those from which the greatest number of refugees have come. According to statistics provided by the United Nations High Commissioner for Refugees (UNHCR), those provinces are Nangarhar, Paktia, Paktika, Ghazni, and Kandahar. These are also the provinces to which most private sector food shipments are destined.

Combining the selection of target regions with the route grouping approach, the Phase II team produced the classification system shown in Figure 2-1. The border area is divided into four regions, indicated by the dashed lines, each encompassing a separate network of routes and a separate target market area. Each route group carries the name of a major staging area or border town in the region. In the north of the border region is the "Torkham group," encompassing all the routes near the Khyber Pass and those to its north. The next group is called the "Parachinar group" and includes the routes departing from that town and leading to markets in Paktia and further north. Below Parachinar, and separated on the Afghan side by a range of mountains, is the "Wana group," leading to markets in Ghazni. Finally, in the south of the border region, is the "Quetta group," including the many routes near this major market town.

After identifying target regions and a route classification system, the team selected target markets within the regions, using size and linkages to secondary markets as the major criteria. Both the enumerators, with their detailed regional knowledge, and earlier surveys (especially an ongoing market survey by Development Alternatives Inc. (DAI) under O/AID/Rep's Afghanistan Agricultural Support Project, and our own Phase I survey) were useful in this respect. The markets selected follow.

- Janikhel and Musakhel in Paktia province
- Sharan and Zarghun Shar in Paktika province
- Baraki Rajan in Logar province
- Durrani and Shekhabad in Wardak province
- Asadabad in Kunar province
- Shinvar in Nangarhar province
- Sangin and Sarban Qala in Helmand province

Figure 2-2 shows the specific routes the enumerators followed to arrive at and survey these markets.

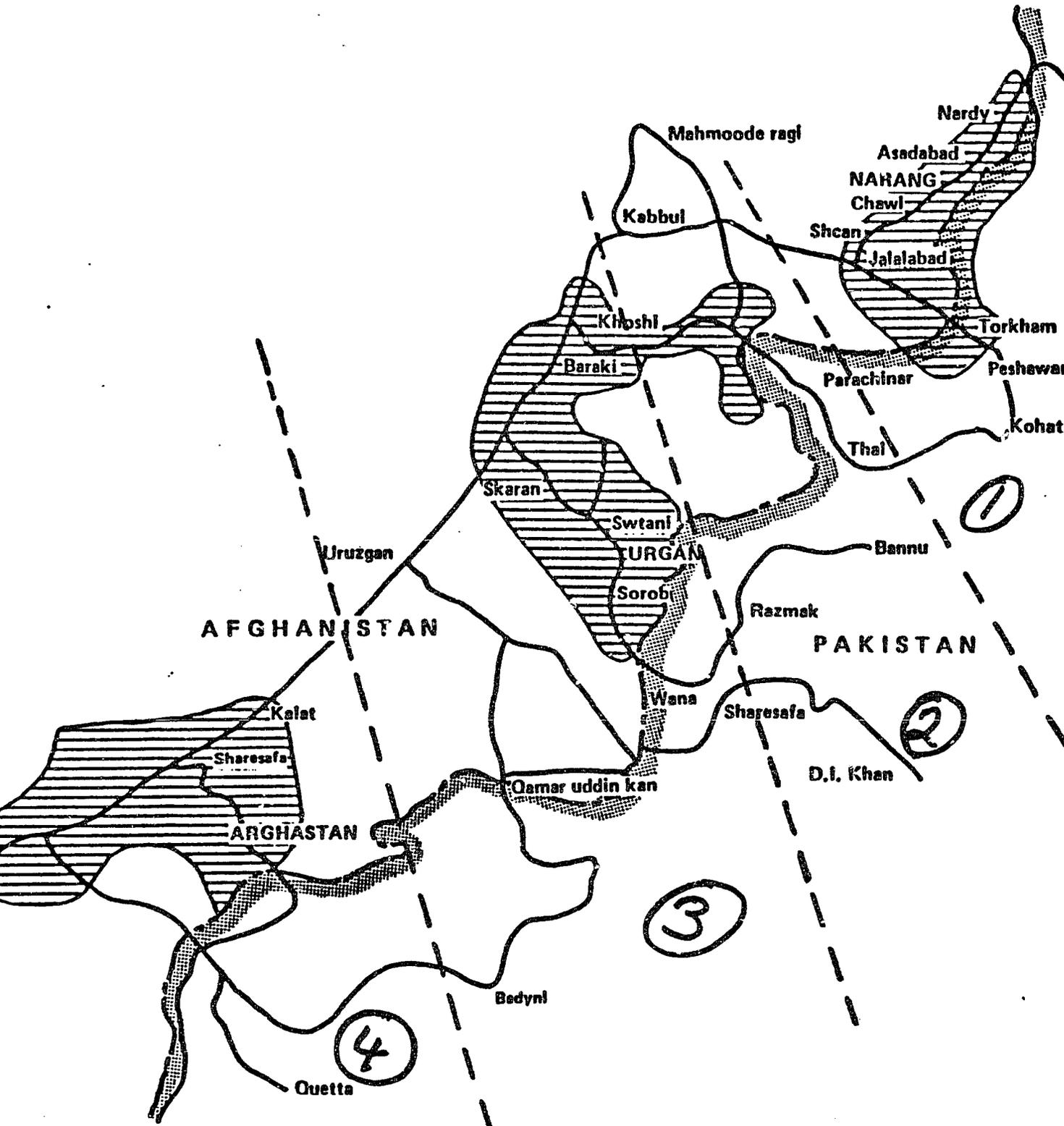
Selection of Interviewees

In light of the project objectives—to determine total volumes, average prices, and related costs of key commodities—and considering the limited survey resources available, the survey forms were designed to obtain total market data from individual respondents. The Phase I study concluded that

Figure 2-1

MAJOR CROSS BORDER ROUTES

DIVIDED INTO ROUTE GROUPS
UTILIZED IN C-B SURVEY



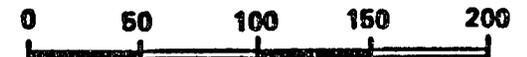
LEGEND



SURVEY AREAS



MAJOR CORRIDORS



APPROXIMATE SCALE IN KILOMETERS

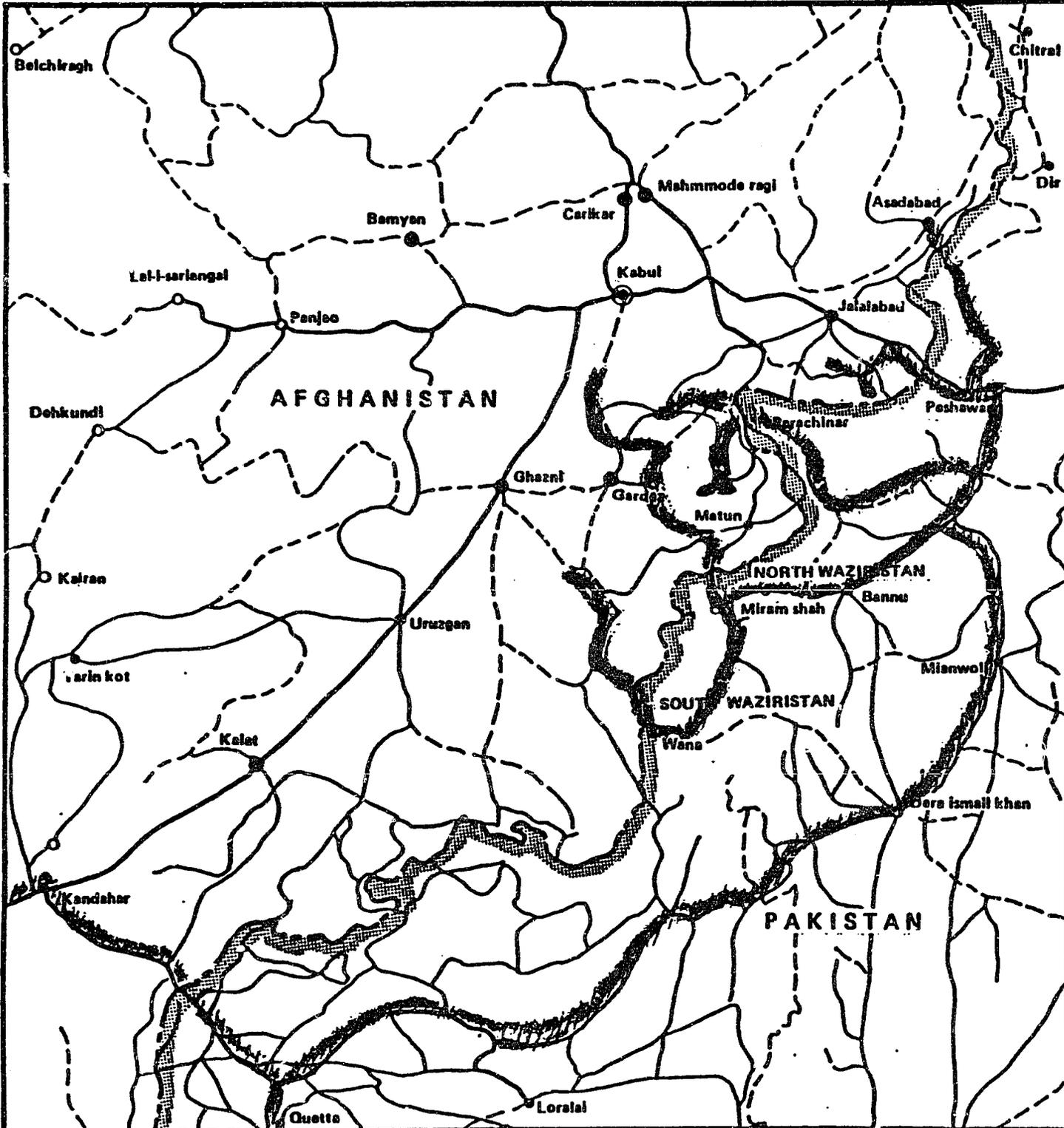


Figure 2-2

**ROADS OF
AFGHANISTAN PAKISTAN
BORDER AREA**

**INDICATING ROUTES TAKEN
BY SURVEYORS**

LEGEND:

-  INTERNATIONAL BOUNDARY
-  CAPITAL OF COUNTRY
-  HEADQUARTERS PROVINCE
-  DISTRICT
-  OTHER TOWNS AND VILLAGES
-  ROADS METALLED MAIN
-  OTHER
-  METALLED IN PAKISTAN



SCALE IN KILOMETERS

consistent and realistic responses concerning total market trends were most likely to be available from large-scale traders, who were in a position to observe the actions of other large traders, whether competitors or partners. Phase II enumerators were therefore instructed to interview the two largest traders in each commodity category for their target markets. (The details of these selections are presented in Appendix A.) In summary, the purpose of choosing interviewees in this manner was to elicit knowledgeable responses concerning total trade, prices, and costs over specific groups of cross-border routes.

Implementation

The survey was carried out with few departures from the plans indicated in the section above and in the methodological appendix (Appendix A). However, winter road conditions and scattered fighting did require some changes in the scheduling and target markets, and interviewees were not all available in the desired numbers with profiles precisely as planned. A brief description of those elements of implementation that departed from the original plans follows.

- **Scheduling.** Although the original plans called for 2 to 3 weeks in the field for the survey teams, all the groups took at least 4 weeks and the Kandahar team remained in the field 7 weeks. The major reason for the delays was poor winter transportation conditions.
- **Scale of Interviewee Operations.** In some cases the enumerators were unable to locate large-scale traders for certain products.
- **Market Selection.** Continued fighting near Kabul made it impossible for the enumerator to visit Durrani market. This market had, in any event, been destroyed the previous year and was reportedly operating as a "mobile bazaar." As a substitute, the enumerator visited another market in Wardak.
- **Product Mix.** At least two examples of each product on the target commodity lists were covered by the survey. However, enumerators often reported that certain products were not available in particular markets. Certain route groups are therefore shown in the raw data as carrying none of certain products.

- **Route Group Concept** Given the divergence of responses, it is apparent that some interviewees did not understand the route group concept and gave answers for particular single roads or for their own markets. These misunderstandings seem to have been in the minority, however.
- **Separate Reporting of Public Sector Wheat Shipments.** The Phase II survey, in contrast to Phase I, attempted to elicit estimates of public sector (largely A.I.D. and UN) wheat shipments. We conclude that public sector shipments are under-reported in the survey and that the total shipments reported are in fact private sector wheat sales. In the final analysis, we use the A.I.D. and UN records to estimate the public sector component of total shipments.

We believe that the departures from planned procedures which could bias the survey results are likely to bias interviewee responses downward—that is, estimates of total volume are likely to be lower than volume is in reality. Although completely unbiased procedures and estimates would be preferable, if a bias must exist, a downward bias is preferred. An upward bias would give the impression that food supplies are more adequate than they actually are and that the trade system is more active than it actually is.

Initial Results

In the three following sections we present the basic statistical results of the cross-border survey, summarizing the raw data on trader profiles and estimates of volume, prices, and transport costs, and describing certain statistical adjustments made to the raw data.

Profile of Respondents

The 380 respondents to the cross-border survey included 40 transporters, about evenly split between Afghans and Pakistanis, and 340 importers and exporters, about one-third of them Pakistanis and the rest Afghans. Table 2-1 summarizes the backgrounds of the exporters and importers, and Table 2-2 summarizes those of the transporters.

Enumerators succeeded only marginally in interviewing large-scale traders as indicated by the item in Table 2-1 labeled "number of interviewees with other shops:" the proportion of respondents reporting ownership of additional shops is only 27, indicating that only one in four interviewees owned even one additional establishment. The same measure for "number

involved in financing" is only .04, indicating that only 1 in 25 respondents took part in trade finance. By contrast, the traders interviewed by the expatriate teams during Phases I of the study all owned multiple establishments, usually covering both import and export activities, and all took part in trade finance, usually through the issue of *hundis* (see the Phase I report for an analysis of this traditional trade finance mechanism).

The transporters interviewed by the enumerators, on the other hand, were larger scale operators. Thirty-five percent of them owned their own trucks, and the firms controlled an average of 88 trucks in Pakistan as compared with 5 trucks on the Afghan side of the border. (The groups interviewed in Pakistan evidently included at least one cooperative, resulting in a high average number of trucks owned.) Only 5 percent of the transporters interviewed were involved in export or import trade, however. This transporter profile is comparable to that of the transport companies interviewed by the expatriate team in Peshawar, although all the latter were involved in trade as well as transport.

Statistical Adjustments

The raw survey data has been adjusted in three ways for this report: (1) certain similar products have been aggregated; (2) diverse bazaar measures have all been standardized to metric units; and (3) extreme values of certain observations have been removed from final calculations, although the full data are included in initial tables. We now describe each of these adjustments in more detail.

Certain fine gradations of product type were not necessary to the objectives of this study, while others appeared to be quite relevant. For example, the prices and quantities of separate types of fruits and nuts are of relatively little interest for purposes of resettlement or relief policy, and they are all aggregated in the tables and analyses included in this report. In contrast, there are two distinct types of certain important products traded along the border—including wheat, rice, sugar, and fertilizer—with different prices, sources, and availabilities. Because these products are likely to play an important role in resettlement and relief processes, they are treated as separate commodities in our analyses.

To compare and total the trade in different commodities, we have converted the measures to the metric system. The *Kabuli seer*, for example, is a commonly used measure of weight for wheat and other products in

Table 2-1. Summary Profile of Traders Interviewed

Country	Category	Number of Interviewees	Commodity	Avg. Yrs. in Operation	Number of Interviewees w/ other shops	No. Involved in Financing	No. Involved in Trans.
Afg.	Importer	2	Cement	1	0	0	0
Afg.	Importer	2	Charcoal	3	0	0	0
Afg.	Importer	21	Cooking Oil	7	4	1	1
Pak.	Exporter	11	Cooking Oil	8	5	0	0
Afg.	Importer	2	Cotton	2	0	0	0
Afg.	Importer	6	DAP	9	1	0	0
Afg.	Exporter	17	Fruit Dried	10	8	2	2
Pak.	Exporter	4	Fruit Dried	6	0	0	0
Pak.	Importer	10	Fruit Dried	6	2	1	0
Afg.	Exporter	8	Fruits	5	4	0	0
Afg.	Importer	6	Fruits	3	1	0	1
Pak.	Exporter	3	Fruits	9	2	0	0
Pak.	Importer	4	Fruits	8	1	0	0
Afg.	Importer	25	Fuels	7	6	0	0
Afg.	Exporter	9	Hides	7	4	1	1
Pak.	Importer	4	Hides	7	1	1	0
Afg.	Importer	1	Mats	4	0	0	0
Afg.	Importer	3	Meat Animals	4	0	0	0
Afg.	Exporter	7	Nuts	8	5	3	2
Pak.	Importer	13	Nuts	7	5	3	2
Afg.	Exporter	2	Pulses	3	2	0	0
Pak.	Exporter	4	Pulses	8	1	0	0
Afg.	Importer	15	Rice	5	2	0	1
Pak.	Exporter	13	Rice	9	7	0	0
Afg.	Importer	5	Rice Thin	3	0	0	0
Afg.	Importer	2	Salt	7	0	0	0
Pak.	Importer	2	Seeds	6	0	0	1
Afg.	Exporter	3	Sheep	3	0	0	0
Afg.	Exporter	4	Spices	6	2	0	0
Pak.	Importer	6	Spices	7	2	1	1
Afg.	Importer	13	Sugar	5	1	0	1
Afg.	Importer	7	Sugar Brown	5	0	0	0
Pak.	Exporter	10	Sugar Brown	9	5	0	0
Pak.	Exporter	3	Sweets	5	2	0	0
Afg.	Importer	2	Tea	20	0	0	0
Afg.	Exporter	2	Tractor	2	0	0	0
Afg.	Importer	1	Tractor	8	0	0	0
Afg.	Importer	11	Urea	6	1	0	0
Pak.	Exporter	2	Urea	14	0	0	0
Afg.	Exporter	2	Vegetables	1	0	0	0
Afg.	Importer	5	Vegetables	6	0	0	0
Afg.	Importer	9	Wheat	7	4	0	0
Pak.	Exporter	3	Wheat	10	3	0	0
Afg.	Importer	13	Wheat Flour	7	1	0	1
Pak.	Exporter	12	Wheat Flour	10	3	0	0
Afg.	Exporter	23	Wood	9	4	2	4
Pak.	Importer	2	Wood	13	0	0	0
Afg.	Exporter	6	Wool	7	3	0	0
Average:				7.11	[a]		
Proportion of Total:					0.27	0.04	0.05
Total Afghan Interviewees		227					
Total Pakistani Interviewees		113					
Total Interviewees		340					

[a] Weighted by number of interviewees.

Source: Nathan-Berger joint venture survey of cross-border trade, February 1990.

Table 2-2. Summary Profile of Transporters Interviewed

	<u>Afghans</u>	<u>Pakistanis</u>
Number Interviewed	21	19
Average Years of Experience	8	12
Number of Interviewees Employed in Transport Firms	7	5
Number of Interviewees Owning Transport Firms	14	14
Average Number of Trucks per Firm	5	88
Number of Transporters Involved in Exporting	2	2
Number of Transporters Involved in Importing	2	3
Total Number of Transporters Interviewed		40
Average Years of Experience of All Transporters Interviewed		10
Number of Transporters Involved in Exporting/Importing		7

Source: Nathan-Berger joint venture survey of cross-border trade, February 1990.

Afghanistan, but the kilogram is used in Pakistan. Prices are quoted variously in either unit or in terms of bags of various weights. To compare the various prices and analyze their tendencies, as well as to aggregate shipments into totals, we converted all such measures to kilograms.

Certain common Afghan measurements required assumptions concerning average weights. A *shikara*, for instance, contains 100 oranges, the conversion of which requires an assumption of the average weight of an orange. More mundane measures, such as "head of livestock" or "Datsun-load," also require similar assumptions. The team relied on the experience of its agricultural economist for these conversions, usually making the most conservative assumption possible for the calculation—that is, tending to select the lowest-final-weight alternative. For example, the weight conversion chosen for one "head of cattle" is the average food value of 200 kilograms, instead of the average live shipped weight of perhaps four times as much.

The most important adjustment made to the raw data is that of removing "outliers" or extreme values of certain observations. At first glance an observation may appear faulty—either the interviewer or the interviewee misunderstood the question or misrecorded the response. Rather than rely on pure judgment, however, we used standard deviations as a guide, removing all observations further than two standard deviations from the mean. This correction was performed for all price data and for the volume data of the more important commodities. This process improved the measures of deviation without changing the measures of central tendency significantly, improving our confidence in the general reliability of the remaining observations. Both the original and the corrected data sets are summarized in the tables presented in this chapter.

Estimates

Tables 2-3 through 2-9 summarize the raw data and initial statistical adjustments on trade volume, prices, and transport costs for the survey's target commodities. Later chapters of this report will present further refinements and analyses of these data. A brief description of the findings presented for each class of data is given here.

- **Volume.** Tables 2-3 and 2-4 summarize the original and adjusted observations of trade volume for the target commodities. The original observations indicate a total volume of unofficial exports of targeted commodities from Pakistan to Afghanistan of 466,000 metric tons. Adjusting the observations for outliers reduces this estimate to 412,000 metric tons, which is within the range of Phase I estimates. In that study we estimated the approximate flow of unofficial

exports from Pakistan, using standard 10-ton truck loads as a measure. The range estimated during June 1989 was 100 to 140, 10-ton trucks per day, or 312 to 437 tons per year, assuming a 6-day week.

In terms of exports from Afghanistan to Pakistan, the unadjusted observations from the new survey yield an estimate of 527,000 metric tons. Adjusted observations (only dried fruit figures were adjusted) lowered this estimate only slightly, to 517,000 metric tons. Most of this tonnage is timber, however, which was not included in the Phase I list of target commodities. Without that item, total unofficial exports from Afghanistan, as measured by these responses, amount to only about 78,000 metric tons.

The shipment of most importance for this study is the export of wheat and flour from Pakistan to Afghanistan, the adjusted estimate for which is 80,000 metric tons per year. We interpret this estimate to include only private sector wheat sales, although the questionnaire had been intended to capture public sector shipments as well.

- **Prices:** Tables 2-5, 2-6, and 2-7 present the unadjusted and adjusted observations of the prices of selected commodities, tracing price development from the wholesale level in the country of origin through the retail level in the country of destination. Wheat and wheat flour prices are highest in Kabul city and surrounding provinces, and lowest in Kunar and Paktia, two provinces within easy reach of major Pakistan centers. The highest price in the survey was reported in Wardak province. In general, prices of wheat and wheat flour increase the farther the market is from the Pakistan border. This indicates a close correspondence between prices and transport costs. Despite the continuation of wartime conditions, a functioning private market in foodstuffs still prevails in the Afghan border provinces.
- **Transport Costs:** In Tables 2-8 and 2-9 we present the raw and adjusted average observations of transport costs and distances for the major markets and commodities surveyed. Even at this aggregate

**Table 2-3. Unadjusted Observations of Commodity Flows
by Route Group During 1989**

Average Observations of Trade Volume

(metric tons)

Classification	Commodity	Route	Dec	Nov	Oct	Sep	Aug	Jul	Jun	May	Apr	Mar	Feb	Jan	Total
Pak. Exporter	Cement	Wana	28	45	43	25	23	20	16	15					214
Pak. Exporter	Cooking Oil	Parachinar	441	414	421	470	501	553	563	462	428	458	356	327	5,394
Pak. Exporter	Cooking Oil	Quetta	885	954	983	985	1,076	1,133	1,195	1,388	1,380	1,328	1,306	1,208	13,820
Pak. Exporter	Cooking Oil	Torkham	58	57	59	58	65	63	62	60	65	64	65	66	742
Pak. Exporter	Cooking Oil	Wana	570	591	599	667	444	229	158	142	242	439	470	589	5,141
Pak. Exporter	Cotton	Wana	105	77	140	63	28	53	14	28	42	56	70	42	718
Pak. Exporter	Dap	Quetta	1,975	1,975	1,975	1,550	1,375	1,600	1,370	350	300	675	410	380	13,935
Pak. Exporter	Dap	Wana		40	70	55	85				28	20			298
Afg. Exporter	Fruit Dried	Parachinar	122	99	115	135	85	85	85	61	93	90	79	92	1,141
Afg. Exporter	Fruit Dried	Quetta	160	108	85	72	80	83	106	97	86	92	103	98	1,170
Afg. Exporter	Fruit Dried	Wana	2,655	915	937	535	1,324	267	220	115	147	524	1,710	2,482	11,831
Pak. Exporter	Fruit Dried	Parachinar	7										9	10	33
Pak. Exporter	Fruit Dried	Quetta	10												10
Pak. Exporter	Fruit Dried	Torkham	5									5	4	4	18
Pak. Exporter	Fruit Dried	Wana	44									83	95	96	318
Afg. Exporter	Fruits	Parachinar	40	333	650	67	200								1,290
Afg. Exporter	Fruits	Quetta	1,402	1,149	330	344	285	238	210	50	110	128	123	822	5,189
Afg. Exporter	Fruits	Wana	2,410	739	966	495	109	90	51	63	114	120	108	235	5,499
Pak. Exporter	Fruits	Parachinar	613	288							1,650	5,475	14,075	28,100	50,200
Pak. Exporter	Fruits	Wana	520	305								393	762	635	2,614
Pak. Exporter	Fuels	Parachinar	128	115	149	179	191	194	213	158	160	138	133	132	1,891
Pak. Exporter	Fuels	Quetta	1,027	1,027	1,027	1,027	960	960	960	960	960	983	983	983	11,857
Pak. Exporter	Fuels	Torkham	90	86	90	86	82	80	74	74	74	74	80	86	976
Pak. Exporter	Fuels	Wana	1,612	1,581	2,013	3,017	4,515	3,935	5,614	4,766	4,420	1,675	978	1,327	35,448
Pak. Exporter	Meat Animals	Parachinar	3	8	4		6	10	4	4	6				45
Pak. Exporter	Meat Animals	Wana	90	52	60	132	20	16	8	9	9	24	36	60	516
Afg. Exporter	Nuts	Parachinar	109	150	135	81	64	64	64	64	81	70	70	82	1,034
Afg. Exporter	Nuts	Quetta	120	120	120	120	100								580
Afg. Exporter	Nuts	Torkham	401	401	401	401	401	401	401	103	103	255	401	401	4,071
Afg. Exporter	Nuts	Wana	5,712	6,204	8,315	6,207	354	259	322	307	1,209	1,681	1,527	3,522	35,618
Afg. Exporter	Pulses	Torkham	476	476	476	476	392	392	392	392	392	392	420	420	5,096
Pak. Exporter	Pulses	Parachinar	60	61	63	61	60	79	79	79	79	79	60	61	820
Pak. Exporter	Pulses	Torkham	62	62	62	62	62	55	55	55	55	55	55	44	685
Pak. Exporter	Pulses	Wana	10	5	7	25	10	20	15	10	30	30	15	30	207
Pak. Exporter	Rice	Parachinar	333	335	374	417	384	420	468	462	454	407	319	300	4,672
Pak. Exporter	Rice	Quetta	1,478	1,495	1,485	1,490	1,498	1,493	1,410	1,450	1,445	1,495	1,495	1,500	17,733
Pak. Exporter	Rice	Torkham	151	146	192	187	188	155	155	155	152	151	150	155	1,937
Pak. Exporter	Rice	Wana	995	945	982	496	724	602	456	489	612	711	884	931	8,827
Pak. Exporter	Rice Thin	Parachinar	333	367	470	473	693	690	647	653	657	847	383	377	6,590
Pak. Exporter	Rice Thin	Wana	8,157	6,028	5,391	4,141	2,260	1,117	885	385	2,504	3,631	7,887	7,772	50,157
Pak. Exporter	Salt	Parachinar	98	98	98	98	98	99	100	98	99	98	97	97	1,177

(continued)

Table 2-3. (continued)

Classification	Commodity	Route	Dec	Nov	Oct	Sep	Aug	Jul	Jun	May	Apr	Mar	Feb	Jan	Total
Afg. Exporter	Seeds	Parachinar	70	63										490	623
Afg. Exporter	Seeds	Wana	245	196	140				77						658
Afg. Exporter	Spices	Parachinar	6	6	6	8	8	8	8	8	8	11	10	10	96
Afg. Exporter	Spices	Quetta	274	274	273	137	178	171	100	154	154	140	279	285	2,418
Afg. Exporter	Spices	Torkham	11	11	11	11	11	11	11	11	11	11	11	11	132
Afg. Exporter	Spices	Wana	46	59	61	77	60	73	69	67	39	47	30	26	653
Pak. Exporter	Sugar	Parachinar	84	96	138	136	119	121	111	98	97	159	191	185	1,535
Pak. Exporter	Sugar	Quetta	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	14,400
Pak. Exporter	Sugar	Torkham	32	31	31	41	43	45	45	43	42	41	41	43	476
Pak. Exporter	Sugar	Wana	281	311	314	335	327	317	309	323	246	233	211	172	3,380
Afg. Exporter	Sugar Brown	Quetta	35	30	30	30	30	25	25				15	30	250
Pak. Exporter	Sugar Brown	Parachinar	1,406	1,365	1,277	411	397	351	299	477	878	1,310	1,469	1,602	11,240
Pak. Exporter	Sugar Brown	Torkham	84	84	84	35	35	35	35	49	70	70	84	84	749
Pak. Exporter	Sugar Brown	Wana	2,314	1,639	380	356	240	96	65	59	132	282	2,300	2,973	10,836
Pak. Exporter	Sweets	Wana	1,130	1,370	1,920	1,430	1,483	1,697	2,083	1,833	1,390	1,327	1,413	1,343	18,420
Pak. Exporter	Tea	Parachinar	90	90	85	90	93	98	103	105	105	100	93	93	1,143
Pak. Exporter	Urea	Quetta	2,773	2,767	2,700	1,767	1,533	2,033	1,483	733	740	1,487	667	567	19,250
Pak. Exporter	Urea	Torkham	825	808	750	717	642	633	617	558	558	575	687	692	8,042
Pak. Exporter	Urea	Wana			200	300	500		90	160	383	363	220	183	2,399
Afg. Exporter	Vegetables	Quetta	400	400	400	400	400	400	400	200	200	200	200	200	3,800
Pak. Exporter	Vegetables	Parachinar	155	205	255	54	41	31	27	47	78	84	104	155	1,234
Pak. Exporter	Vegetables	Quetta	500	500	350	350	350	350	700	700	700	700	450	450	6,100
Pak. Exporter	Vegetables	Wana	550	600	650	500	150	75	50			250	550	445	3,820
Pak. Exporter	Wheat	Parachinar	230	250	220	233	267	273	260	300	267	277	243	233	3,083
Pak. Exporter	Wheat	Quetta	5,450	5,450	5,275	4,750	4,650	4,550	4,200	4,275	4,400	4,800	5,175	5,580	58,555
Pak. Exporter	Wheat	Torkham	100	100	100	100	75	75	75	75	75	75	75	75	1,000
Pak. Exporter	Wheat	Wana	2,888	2,686	2,749	2,359	907	634	465	465	1,022	1,318	1,629	3,034	20,156
Pak. Exporter	Wheat Flour	Parachinar	634	612	675	628	863	2,214	2,703	2,994	3,052	3,124	858	844	19,201
Pak. Exporter	Wheat Flour	Quetta	150	100								100	600	400	1,350
Pak. Exporter	Wheat Flour	Torkham	105	110	110	126	135	120	129	142	129	135	154	165	1,560
Pak. Exporter	Wheat Flour	Wana	2,983	3,020	2,670	2,361	1,149	891	761	661	587	1,134	1,955	3,244	21,394
Afg. Exporter	Wood	Parachinar	34,475	35,250	39,300	28,150	30,100	30,950	33,850	32,550	28,950	28,175	22,150	19,700	361,600
Afg. Exporter	Wood	Torkham	2,900	2,900	2,900	2,900	2,900	2,900	2,900	2,900	2,900	2,400	2,400	2,400	33,300
Afg. Exporter	Wood	Wana	3,115	6,020	5,250	5,635	2,975	2,625	2,048	2,800	3,640	3,903	2,888	2,940	43,838
Afg. Exporter	Wool	Quetta	807	807	807	770	737	705	572	440	332	333	330		6,640
Afg. Exporter	Wool	Wana	210	140	350	140	140	70	56	70	56	42			1,274
Average Total Volume of Trade			100,048	97,400	100,944	81,232	71,477	69,230	72,297	68,000	70,635	75,157	84,378	103,314	994,111
Average Volume of Afghan Exports			56,199	55,851	62,058	47,190	40,932	39,817	41,966	40,451	38,624	36,613	32,854	34,246	527,802
Average Volume of Pakistani Exports			43,850	40,549	38,886	34,043	30,544	29,413	30,330	27,549	32,011	38,543	51,524	69,068	466,310

Source: Nathan-Berger joint venture survey of cross-border trade, February 1990.

**Table 2-4. Adjusted Observations of Selected Commodity Flows [a]
by Route Group During 1989**

Classification	Commodity	Route	Average Volume (metric tons)												Total
			Dec	Nov	Oct	Sep	Aug	Jul	Jun	May	Apr	Mar	Feb	Jan	
Pak. Export	Wheat	Parachinar	230	250	220	233	267	273	260	300	297	277	243	233	3,083
Pak. Export	Wheat	Quetta	5,450	5,450	5,275	4,750	4,650	4,550	4,200	4,275	4,400	4,800	5,175	5,580	58,555
Pak. Export	Wheat	Torkham	100	100	100	100	75	75	75	75	75	75	75	75	1,000
Pak. Export	Wheat	Wana	2,888	2,686	2,749	2,359	907	634	465	465	1,022	1,318	1,629	3,034	20,156
Pak. Export	Wheat	Wana	292	332	332	300	355	328	340	340	317	307	260	262	3,763
Est. Total for All Surveyed Routes:			8,668	8,486	8,344	7,443	5,899	5,533	5,000	5,115	5,794	6,469	7,123	8,922	82,794
Adj. Est. Total for All Surveyed Routes:			6,072	6,132	5,927	5,383	5,347	5,227	4,875	4,990	5,088	5,458	5,753	6,150	66,402
Pak. Export	Wheat Flour	Parachinar	634	612	675	628	863	2,214	2,703	2,994	3,052	3,124	858	644	19,201
Pak. Export	Wheat Flour	Parachinar	308	311	357	348	623	846	761	997	994	1,146	341	318	7,347
Pak. Export	Wheat Flour	Quetta	150	100								100	600	400	1,350
Pak. Export	Wheat Flour	Torkham	105	110	110	126	135	120	129	142	129	135	154	165	1,560
Pak. Export	Wheat Flour	Wana	4,331	18,684	17,974	15,299	1,458	959	738	659	604	1,184	2,377	4,323	68,588
Pak. Export	Wheat Flour	Wana	477	360	360	348	309	347	465	425	333	312	499	408	4,584
Est. Total for All Surveyed Routes:			5,220	19,506	18,759	16,053	2,453	3,293	3,570	3,796	3,785	4,543	3,989	5,732	90,699
Adj. Est. Total for All Surveyed Routes:			1,039	881	827	822	1,067	1,313	1,355	1,564	1,455	1,693	1,533	1,292	14,840
Pak. Export	Cooking Oil	Parachinar	441	414	421	470	501	553	563	462	428	458	356	327	5,394
Pak. Export	Cooking Oil	Parachinar	154	143	146	155	153	158	164	151	136	157	155	138	1,808
Pak. Export	Cooking Oil	Quetta	885	954	983	985	1,076	1,133	1,195	1,388	1,380	1,328	1,306	1,208	13,820
Pak. Export	Cooking Oil	Quetta	1,071	1,070	1,071	1,196	1,293	1,346	1,407	1,388	1,380	1,328	1,306	1,208	15,062
Pak. Export	Cooking Oil	Torkham	58	57	59	58	65	63	62	60	65	64	65	66	742
Pak. Export	Cooking Oil	Wana	570	591	599	667	444	229	158	142	242	439	470	589	5,141
Pak. Export	Cooking Oil	Wana	236	229	229	320	291	137	128	125	149	223	254	282	2,602
Est. Total for All Surveyed Routes:			1,954	2,016	2,062	2,180	2,086	1,977	1,978	2,052	2,115	2,288	2,197	2,190	25,096
Adj. Est. Total for All Surveyed Routes:			1,518	1,498	1,505	1,730	1,802	1,704	1,760	1,723	1,730	1,771	1,780	1,694	20,215
Pak. Export	Pulses	Parachinar	60	61	63	61	60	79	79	79	79	79	60	61	820
Pak. Export	Pulses	Parachinar	15	16	18	16	15	20	20	20	20	20	15	16	211
Pak. Export	Pulses	Torkham	228	228	228	228	144	139	139	139	139	139	201	169	2,122
Pak. Export	Pulses	Torkham	246	246	246	246	89	79	79	79	79	79	202	202	1,873
Pak. Export	Pulses	Wana	10	5	7	25	10	20	15	10	30	30	15	30	207
Est. Total for All Surveyed Routes:			298	294	297	314	215	238	233	228	248	248	276	260	3,149
Adj. Est. Total for All Surveyed Routes:			271	267	271	287	114	119	114	109	129	129	232	248	2,291
Pak. Export	Rice	Parachinar	333	335	374	417	384	420	468	462	454	407	319	300	4,672
Pak. Export	Rice	Parachinar	283	287	306	330	258	256	325	328	327	257	209	217	3,386
Pak. Export	Rice	Quetta	1,478	1,495	1,485	1,490	1,496	1,493	1,410	1,450	1,445	1,495	1,495	1,500	17,733
Pak. Export	Rice	Torkham	151	146	192	187	188	155	155	155	152	151	150	155	1,937
Pak. Export	Rice	Wana	995	945	982	496	724	602	456	489	612	711	884	931	8,827
Pak. Export	Rice	Wana	311	371	370	278	318	318	327	323	342	245	513	416	4,133
Est. Total for All Surveyed Routes:			2,956	2,920	3,032	2,590	2,794	2,670	2,489	2,556	2,663	2,764	2,848	2,886	33,168
Adj. Est. Total for All Surveyed Routes:			2,224	2,300	2,353	2,295	2,263	2,222	2,217	2,257	2,265	2,148	2,367	2,288	27,188

(continued)

Table 2-4. (continued)

Classification	Commodity	Route	Dec	Nov	Oct	Sep	Aug	Jul	Jun	May	Apr	Mar	Feb	Jan	Total
Pak. Export	Rice Thin	Parachinar	333	367	470	473	693	690	647	653	657	847	383	377	6,590
Pak. Export	Rice Thin	Parachinar	150	200	180	185	165	160	200	210	215	220	225	215	2,325
Pak. Export	Rice Thin	Wana	8,157	6,028	5,391	4,141	2,260	1,117	885	385	2,504	3,631	7,887	7,772	50,157
Pak. Export	Rice Thin	Wana	10,833	8,000	7,167	5,500	3,000	1,483	1,177	510	3,333	4,833	10,500	10,333	66,670
Est. Total for All Surveyed Routes:			8,490	6,395	5,861	4,614	2,953	1,807	1,531	1,038	3,161	4,478	8,270	8,149	56,747
Adj. Est. Total for All Surveyed Routes:			10,983	8,200	7,347	5,685	3,165	1,643	1,377	720	3,548	5,053	10,725	10,548	68,995
Pak. Export	Sugar Brown	Parachinar	1,406	1,365	1,277	411	397	351	299	477	878	1,310	1,469	1,602	11,240
Pak. Export	Sugar Brown	Parachinar	520	485	427	323	300	288	253	253	343	378	483	567	4,622
Pak. Export	Sugar Brown	Quetta	35	30	30	30	30	25	25				15	30	250
Pak. Export	Sugar Brown	Torkham	84	84	84	35	35	35	35	49	70	70	84	84	749
Pak. Export	Sugar Brown	Wana	2,314	1,639	380	356	240	96	65	59	132	282	2,300	2,973	10,836
Pak. Export	Sugar Brown	Wana	850	753	735	683	462	158	81	62	156	438	819	915	6,110
Est. Total for All Surveyed Routes:			3,839	3,118	1,771	832	701	507	424	585	1,080	1,662	3,867	4,688	23,075
Adj. Est. Total for All Surveyed Routes:			1,489	1,352	1,276	1,071	827	506	394	364	570	887	1,401	1,596	11,731
Pak. Export	Sugar	Parachinar	84	95	138	138	119	121	111	98	97	159	191	185	1,535
Pak. Export	Sugar	Parachinar	86	101	92	109	103	105	103	89	94	91	87	97	1,154
Pak. Export	Sugar	Quetta	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	14,400
Pak. Export	Sugar	Torkham	32	31	31	41	43	45	45	43	42	41	41	43	476
Pak. Export	Sugar	Wana	281	311	314	335	327	317	309	323	246	233	211	172	3,380
Pak. Export	Sugar	Wana	173	189	144	121	154	146	155	160	128	124	129	106	1,728
Est. Total for All Surveyed Routes:			1,597	1,638	1,683	1,712	1,688	1,682	1,665	1,664	1,585	1,633	1,643	1,600	19,790
Adj. Est. Total for All Surveyed Routes:			1,491	1,521	1,466	1,471	1,499	1,496	1,503	1,491	1,464	1,455	1,456	1,446	17,757
Alg. Export	Fruit Dried	Parachinar	83	99	115	135	85	85	85	61	93	63	58	66	1,030
Alg. Export	Fruit Dried	Parachinar	86	59	23	70	70	70	70	42	41	48	43	57	679
Alg. Export	Fruit Dried	Quetta	130	108	85	72	80	83	106	97	88	92	103	98	1,140
Alg. Export	Fruit Dried	Quetta	147	78	46	30	20	25	70	69	55	62	77	71	748
Pak. Export	Fruit Dried	Torkham	5									5	4	4	18
Alg. Export	Fruit Dried	Wana	2,105	915	937	535	1,324	267	220	115	147	398	1,280	1,846	10,088
Alg. Export	Fruit Dried	Wana	176	134	96	75	63	60	60	53	86	98	113	121	1,075
Est. Total for All Surveyed Routes:			2,323	1,122	1,136	743	1,488	435	411	273	326	558	1,445	2,015	12,276
Adj. Est. Total for All Surveyed Routes:			354	271	164	174	153	155	200	164	182	213	237	254	2,520

[a] These commodities were selected because, as basic food staples, they are necessary to meet the nutritional requirements of Afghans. Their relative importance in the composition of cross-border trade is reflected in the number of survey respondents who trade in them. It is therefore likely that these commodities comprise the bulk of unofficial food commodity trade between Pakistan and Afghanistan.

Note: The italicized figures represent adjustments to raw survey data; the adjustments are simple averages, excluding those numbers which diverge from the rest of the data.

Source: Nathan-Berger joint venture survey of cross-border trade, February 1990.

**Table 2-5. Unadjusted Averages of Observations of Prices [a]
for Selected Commodities During 1989**

Province	Commodity	Currency Unit	December 1989 Prices					June 1989 Prices				
			Pakistan		Border	Afghanistan		Pakistan		Afghanistan		
			Retail	Wholesale		Wholesale	Retail	Retail	Wholesale	Border	Wholesale	Retail
					41	9	100			41	89	96
Paktika	Cement	Afghani			122	166	180			99	159	173
Paktika	Charcoal	Afghani										
Helmand	Cooking Oil	Afghani		410	432	494	513		410	432	257	266
Kunar	Cooking Oil	Rupee		19		20	21		18		19	20
Logar	Cooking Oil	Afghani		421		433	453		347		367	380
Nangarhar	Cooking Oil	Afghani		425	467	490	560		407	467	470	540
Paktia	Cooking Oil	Afghani		423	445	468	515		387		415	438
Paktika	Cooking Oil	Afghani			445	506	583				462	531
Peshawar	Cooking Oil	Rupee		18	19				18	19		
Wardak	Cooking Oil	Afghani		416	443	486	481		416	443	491	494
Paktika	Cotton	Afghani			274	550	571			274	521	299
Helmand	DAP	Afghani		114	121	158	163		110	117	145	150
Kunar	DAP	Rupee		4		6	6		4		5	6
Paktika	DAP	Afghani			46	89	95			46	82	89
Helmand	Fruit Dried	Afghani	810	456	423	400		886	463	398	408	
Logar	Fruit Dried	Afghani	491	358	345	229		457		343	136	
Paktia	Fruit Dried	Afghani	929	857	644	643						
Paktika	Fruit Dried	Afghani			460	445				475	400	
Peshawar	Fruit Dried	Afghani	377	302	250	200		466	411	419	214	
Wardak	Fruit Dried	Afghani	555	412	649	557		555	523	1,690	1,600	
Helmand	Fruits	Afghani	391	282	106	83		379	283	85	67	
Logar	Fruits	Afghani	274	201	157	134						
Paktia	Fruits	Afghani		38	40	75	100					
Paktika	Fruits	Afghani		69	132	129	145					
Peshawar	Fruits	Rupee	34	18	21			30	28	24		
Wardak	Fruits	Afghani	294	163	124	147	180					
Helmand	Fuels	Afghani		162	172	240	293		146	156	231	254
Kunar	Fuels	Rupee		5		7	8		5		7	8
Logar	Fuels	Afghani		110		139	139		101		127	118
Nangarhar	Fuels	Afghani		91	120	130	157		91	122	129	157
Paktia	Fuels	Afghani		103	103	115	125		103	103	85	85
Paktika	Fuels	Afghani			103	140	150			103	132	140
Wardak	Fuels	Afghani		97	109	133	120		97	109	125	140
Logar	Meat Animals	Afghani		572		550			480		450	
Paktika	Meat Animals	Afghani			686	950	1,088			572	863	944
Helmand	Nuts	Afghani		467	509	471			480	505	369	
Kunar	Nuts	Rupee	16	19		9		18	13		9	
Paktia	Nuts	Afghani			213	206						
Paktika	Nuts	Afghani			980	645				638	543	
Peshawar	Nuts	Afghani	937	929	535	786		937	939	539	762	
Wardak	Nuts	Afghani	1,943		986	893						

(continued)

Table 2-5. (continued)

Province	Commodity	Currency Unit	December 1989 Prices					June 1989 Prices					
			Pakistan Retail	Pakistan Wholesale	Border	Afghanistan Wholesale	Afghanistan Retail	Pakistan Retail	Pakistan Wholesale	Border	Afghanistan Wholesale	Afghanistan Retail	
Kunar	Pulses	Rupee	13	11		8		13	11		6		
Peshawar	Pulses	Rupee		19					10				
Helmand	Rice	Afghani		297	303	344	350		286	292	314	319	
Kunar	Rice	Rupee		9		11	13		9		10	13	
Logar	Rice	Afghani		165		221	221		160		200	214	
Paktia	Rice	Afghani		117	149	130	141		117	148	97	108	
Paktika	Rice	Afghani		103	106	155	180		101	97	140	160	
Peshawar	Rice	Rupee		8	10				8	10			
Wardak	Rice	Afghani		211	249	342	350		210	247	392	409	
Paktia	Rice Thin	Afghani		215	224	230	244		215	222	170	183	
Paktika	Rice Thin	Afghani			280	325	350			271	318	336	
Peshawar	Rice Thin	Rupee		9	9				8	9			
Paktia	Salt	Afghani		29	31	61	68		14	17	23	32	
Paktia	Seeds	Afghani	929	857	644	643							
Peshawar	Seeds	Afghani	686	549	400			572	503	400			
Logar	Sheep	Afghani		32,004	26,100	26,000			32,004	22,000	21,000		
Helmand	Spices	Afghani	1,883	1,712	1,433	1,411		1,861	1,790	1,452	1,429		
Kunar	Spices	Afghani	229	777		700		229	777		700		
Peshawar	Spices	Afghani	5,258	4,397	857	829		5,340	4,450	857	860		
Wardak	Spices	Afghani		3,429	1,750	1,550			3,658	1,800	1,650		
Helmand	Sugar	Afghani		277	284	333	348		267	275	306	320	
Kunar	Sugar	Rupee		11		18	13		11		18	13	
Logar	Sugar	Afghani		240	251	310	350		222	233	275	300	
Paktia	Sugar	Afghani		255	256	280	300		255	256	220	250	
Paktika	Sugar	Afghani			251	301	325			251	295	320	
Peshawar	Sugar	Rupee		11	11				11	11			
Wardak	Sugar	Afghani		238	262	280	280		234	258	280	300	
Helmand	Sugar Brown	Afghani	496	393	205	180		491	388	191	167		
Paktia	Sugar Brown	Afghani		180	180	186	193		261	269	214	229	
Paktika	Sugar Brown	Afghani			152	200	213			213	239	253	
Peshawar	Sugar Brown	Rupee		6	7				10	11			
Wardak	Sugar Brown	Afghani		137	152	330	327		145	160	360		
Peshawar	Sweets	Rupee		11	11				12	12			
Helmand	Tractor	Afghani		2,468,880	2,553,462	2,702,000			2,331,720	2,411,730	2,400,000		
Paktika	Tractor	Afghani			2,183,130	1,225,000				2,057,400	1,025,000		
Helmand	Urea	Afghani		57	64	102	106		55	61	88	93	
Kunar	Urea	Rupee		3		4	5		3		4	5	
Nangarhar	Urea	Afghani		68	89	97	110		59	79	86	100	

(continued)

Table 2-5. (continued)

Province	Commodity	Currency Unit	December 1989 Prices				June 1989 Prices					
			Pakistan Retail	Pakistan Wholesale	Border	Afghanistan Wholesale	Afghanistan Retail	Pakistan Retail	Pakistan Wholesale	Border	Afghanistan Wholesale	Afghanistan Retail
Paktika	Urea	Afghani			55	118	123			55	118	124
Peshawar	Urea	Rupee		3					3			
Wardak	Urea	Afghani							37	43	50	50
Helmand	Vegetables	Afghani		842 *	264 *	258 *	131		300 *	341 *	327 *	141
Kandahar	Vegetables	Afghani		457	358	321			461	290	250	
Paktia	Vegetables	Afghani		86	107	88	100		43	64	44	50
Paktika	Vegetables	Afghani			32	74	97			37	91	111
Helmand	Wheat	Afghani		57	62	95	100		51	56	84	90
Kandahar	Wheat	Afghani		57	62	95	100		51	56	84	90
Paktika	Wheat	Afghani		86	95	142	148		86	93	139	135
Peshawar	Wheat	Rupee		2	3				2	3		
Quetta	Wheat	Afghani		57	62	90 *	98		51	56	69 *	70
Wardak	Wheat	Afghani		59	67	140	128		58	66	159	145
Kunar	Wheat Flour	Rupee		3		3	4		3		3	3
Logar	Wheat Flour	Afghani		72	72	106	103		67	67	95	100
Paktia	Wheat Flour	Afghani		73	80	96	102		52	57	65	69
Paktika	Wheat Flour	Afghani		91	94	135	148		90	92	126	140
Peshawar	Wheat Flour	Rupee		3	3				3	3		
Wardak	Wheat Flour	Afghani		64	84	154	153		62	80	174	168
Helmand	Wool	Afghani		498	451	416			509	422	435	
Kandahar	Wool	Afghani		578	322	295			592	317	290	
Paktika	Wool	Afghani				571					714	

[a] All prices are per kilogram except for sheep and tractors which are priced per unit.

Note: Price data for hides and wool have not been included here since the survey data do not contain standardized units of measure for these two commodities.

* These figures will be adjusted for analytical purposes as they contain one or more outliers. They have been included in this table to present an all-inclusive summary of the survey data. The adjusted data appear in Table II-6 and Table II-7.

Source: Nathan-Berger joint venture survey of cross-border trade, February 1990.

**Table 2-6. Adjusted Averages of Observations of Prices [a]
for Selected Commodities During 1989**

Province	Commodity	Currency Unit	December 1989 Prices					June 1989 Prices				
			Pakistan		Border	Afghanistan		Pakistan		Border	Afghanistan	
			Retail	Wholesale		Wholesale	Retail	Retail	Wholesale		Wholesale	Retail
Paktika	Cement	Afghani			41	91	100			41	89	96
Paktika	Charcoal	Afghani			122	166	180			99	159	173
Helmand	Cooking Oil	Afghani		410	432	494	513		410	432	467 *	483 *
Kunar	Cooking Oil	Rupee		19		20	21		18		19	20
Logar	Cooking Oil	Afghani		421		433	453		347		367	380
Nangarhar	Cooking Oil	Afghani		425	467	490	560		407	467	470	540
Paktia	Cooking Oil	Afghani		423	445	468	515		387	415	399	438
Paktika	Cooking Oil	Afghani			445	506	583			462	454	531
Peshawar	Cooking Oil	Rupee		18	19				18	19		
Wardak	Cooking Oil	Afghani		416	443	486	481		416	443	491	494
Paktika	Cotton	Afghani			274	550	571			274	521	543 *
Helmand	DAP	Afghani		114	121	158	163		110	117	145	150
Kunar	DAP	Rupee		4		6	6		4		5	6
Paktika	DAP	Afghani			46	89	95			46	82	89
Helmand	Fruit Dried	Afghani	810	587 *	423	400		886	600 *	398	408	
Logar	Fruit Dried	Afghani	491	358	345	229		457		343	196	
Paktia	Fruit Dried	Afghani	929	857	644	643				475	400	
Paktika	Fruit Dried	Afghani			460	445				419	214	
Peshawar	Fruit Dried	Afghani	377	302	277 *	200		466	411	419		
Wardak	Fruit Dried	Afghani	555	412	302 *	210 *		555	523	1,690		
Helmand	Fruits	Afghani	391	282	106	83		379	283	85	67	
Logar	Fruits	Afghani	274	201	157	134						
Paktia	Fruits	Afghani		38	40	75	100					
Paktika	Fruits	Afghani		69	132	129	145					
Peshawar	Fruits	Rupee	34	30 *	26 *			30	28	24		
Wardak	Fruits	Afghani	294	163	124	147	180					
Helmand	Fuels	Afghani		162	172	240	293		146	156	231	254
Kunar	Fuels	Rupee		5		7	8		5		7	8
Logar	Fuels	Afghani		110		139	139		101		127	118
Nangarhar	Fuels	Afghani		91	120	130	157		91	122	129	157
Paktia	Fuels	Afghani		103	103	115	125		103	103	85	95
Paktika	Fuels	Afghani			103	140	150			103	132	140
Wardak	Fuels	Afghani		97	109	133	120		97	109	125	140
Logar	Meat Animals	Afghani		572		550			480		450	
Paktika	Meat Animals	Afghani			686	950	1,088			572	863	944
Helmand	Nuts	Afghani		467	509	471			480	505	369	
Kunar	Nuts	Rupee	16	13		9		16	13		9	
Paktia	Nuts	Afghani			213	206						
Paktika	Nuts	Afghani			980	645				838	543	
Peshawar	Nuts	Afghani	1,074 *	1,052 *	366 *	786		1,074 *	1,052 *	366 *	762	
Wardak	Nuts	Afghani	1,943		986	853						

(continued)

Table 2-6. (continued)

Province	Commodity	Currency Unit	December 1989 Prices					June 1989 Prices						
			Pakistan Retail	Pakistan Wholesale	Border	Afghanistan Wholesale	Afghanistan Retail	Pakistan Retail	Pakistan Wholesale	Border	Afghanistan Wholesale	Afghanistan Retail		
Kunar	Pulses	Ruppee	13	11			8			13	11			5
Peshawar	Pulses	Ruppee		10							10			
Helmand	Rice	Afghani		297	303		344	350			286	292	314	319
Kunar	Rice	Ruppee		9			11	13			9		10	13
Logar	Rice	Afghani		165			221	221			160		200	214
Paktia	Rice	Afghani		117	149		80 *	90 *			117	148	60 *	70 *
Paktika	Rice	Afghani		103	106		155	180			101	97	140	160
Peshawar	Rice	Ruppee		9 *	10						9 *	10		
Wardak	Rice	Afghani		211	249		342	350			210	247	392	409
Paktia	Rice Thin	Afghani		215	224		230	244			215	222	170	183
Paktika	Rice Thin	Afghani			280		325	350				271	318	336
Peshawar	Rice Thin	Ruppee		9	9						8	9		
Paktia	Salt	Afghani		29	31		61	68			14	17	23	32
Paktia	Seeds	Afghani	929	857	644		643							
Peshawar	Seeds	Afghani	686	549	400				572	503	400			
Logar	Sheep	Afghani		32,004	26,100		26,000				32,004	22,000	21,000	
Kunar	Spices	Afghani	229	777			700		229	777			700	
Peshawar	Spices	Afghani		1,898 *	857		661 *			1,777 *	857		650 *	
Wardak	Spices	Afghani		3,420	1,750		1,550			3,658	1,800		1,650	
Helmand	Sugar	Afghani		277	284		333	348			267	275	306	320
Kunar	Sugar	Ruppee		11			18	19			11		18	13
Logar	Sugar	Afghani		240	251		310	350			222	233	275	300
Paktia	Sugar	Afghani		255	256		280	300			255	256	220	250
Paktika	Sugar	Afghani			251		301	325				251	295	320
Peshawar	Sugar	Ruppee		11	11						11	11		
Wardak	Sugar	Afghani		238	262		280	280			234	256	280	300
Helmand	Sugar Brown	Afghani	496	393	205		180		491	388	191		167	
Paktia	Sugar Brown	Afghani		180	180		186	193			261	269	214	229
Paktika	Sugar Brown	Afghani			152		200	213				213	239	253
Peshawar	Sugar Brown	Ruppee		6	7						10	11		
Wardak	Sugar Brown	Afghani		137	152		330	327			145	160	360	
Peshawar	Sweets	Ruppee		11	11						12	12		
Helmand	Tractor	Afghani		2,468,860	2,553,462		2,702,000			2,331,720	2,411,730		2,400,000	
Paktika	Tractor	Afghani			2,183,130		1,225,000				2,057,400		1,025,000	
Helmand	Urea	Afghani		57	64		102	106			55	61	88	93
Kunar	Urea	Ruppee		3			4	5			3		4	5
Nangarhar	Urea	Afghani		68	89		97	110			59	79	86	100

(continued)

Table 2-6. (continued)

Province	Commodity	Currency Unit	December 1989 Prices				June 1989 Prices					
			Pakistan Retail	Pakistan Wholesale	Border	Afghanistan Wholesale	Afghanistan Retail	Pakistan Retail	Pakistan Wholesale	Border	Afghanistan Wholesale	Afghanistan Retail
Paktika	Urea	Afghani			55	118	123			55	118	124
Peshawar	Urea	Rupee	3						3			
Wardak	Urea	Afghani							37	43	50	50
Kandahar	Vegetables	Afghani		457	358	321			461	290	250	
Paktia	Vegetables	Afghani		86	107	88	100		43	64	44	50
Paktika	Vegetables	Afghani			32	74	97			37	91	111
Helmand	Wheat	Afghani		57	62	95	100		51	56	84	90
Kandahar	Wheat	Afghani		57	62	95	100		51	56	84	90
Paktika	Wheat	Afghani		86	95	142	148		86	93	139	135
Peshawar	Wheat	Rupee	2		3				2	3		
Quetta	Wheat	Afghani		57	62	95 *	98		51	56	84 *	89 *
Wardak	Wheat	Afghani		59	67	140	128		58	66	159	145
Kunar	Wheat Flour	Rupee	3			3	4		3		3	3
Logar	Wheat Flour	Afghani		72	72	106	103		67	67	95	100
Paktia	Wheat Flour	Afghani		73	80	96	102		52	57	65	69
Paktika	Wheat Flour	Afghani		91	94	135	148		90	92	126	140
Peshawar	Wheat Flour	Rupee	3		3				3	3		
Wardak	Wheat Flour	Afghani		64	84	154	153		62	80	174	168
Helmand	Wool	Afghani		498	451	416			509	422	435	
Kandahar	Wool	Afghani		578	322	295			582	317	290	
Paktika	Wool	Afghani				571					714	

[a] All prices are per kilogram except for sheep and tractors which are priced per unit.

Note: Price data for hides and wood have not been included here since the survey data do not contain standardized units of measure for these two commodities.

* These figures have been adjusted to exclude outliers found in the original survey data.

Source: Nathan-Berger joint venture survey of cross-border trade, February 1990.

Table 2-7. Adjusted Averages of Observations of Prices for [a]
Selected Commodities During 1989, in Rupees per 100 Kg.

Province	Commodity	December 1989 Prices					June 1989 Prices				
		Pakistan		Border	Afghanistan		Pakistan	Pakistan	Afghanistan		
		Retail	Wholesale		Wholesale	Retail			Retail	Wholesale	Wholesale
Paktika	Cement			180		479			180	593	640
Paktika	Charcoal			533		874			433	1,058	1,151
Helmand	Cooking Oil		1,794	1,890		2,099		1,704	1,890	3,113	3,220
Kunar	Cooking Oil		1,850			1,980		1,780		1,910	2,000
Logar	Cooking Oil		1,840			2,281		1,517		2,444	2,533
Nangarhar	Cooking Oil		1,880	2,458		2,579		1,780	3,111	3,133	3,600
Paktia	Cooking Oil		1,852	1,948		2,461		1,693	1,817	2,658	2,917
Paktika	Cooking Oil			1,947		2,684			2,023	3,028	3,538
Peshawar	Cooking Oil		1,775	1,915				1,785	1,909		
Wardak	Cooking Oil		1,819	1,938		2,558		1,819	1,938	3,271	3,292
Paktika	Cotton			1,200		2,895			1,200	3,476	3,820
Helmand	DAP		499	531		829		480	512	988	1,003
Kunar	DAP		430			560		390		520	580
Paktika	DAP			200		468			200	547	593
Helmand	Fruit Dried	3,545	2,570	2,228		2,105		3,874	2,823	2,854	2,718
Logar	Fruit Dried	2,150	1,567	1,814		1,203		2,000		2,288	1,310
Paktia	Fruit Dried	4,887	4,511	3,387		3,383					
Paktika	Fruit Dried			2,014		2,343					2,667
Peshawar	Fruit Dried	1,850	1,320	1,213		1,053		2,040	1,800	1,833	1,429
Wardak	Fruit Dried	2,429	1,802	1,591		1,103		2,429	2,288	11,287	
Helmand	Fruits	1,709	1,234	560		439		1,659	1,239	564	444
Logar	Fruits	1,200	1,060	828		705					
Paktia	Fruits		165	175		395					526
Paktika	Fruits		300	571		681					763
Peshawar	Fruits	3,950	3,000	2,550				3,000	2,775	2,425	
Wardak	Fruits	1,288	715	542		774					947
Helmand	Fuels										1,387
Helmand	Fuels		637	676.67		1,138		573	612.56	1,385	
Kunar	Fuels										783
Kunar	Fuels		533			676.67		533		676.67	
Logar	Fuels										730
Logar	Fuels		478			730		442			847
Nangarhar	Fuels										827
Nangarhar	Fuels		400	524		684		400	532	862	
Paktia	Fuels										658
Paktia	Fuels		450	450		605		450	450	567	
Paktika	Fuels										788
Paktika	Fuels			450		734			450	892	
Wardak	Fuels										632
Wardak	Fuels		425	475		697		425	475	533	
Logar	Meat Animals		2,500			2,895		2,100		3,000	6,292
Paktika	Meat Animals			3,000		5,000			2,500	5,750	
Helmand	Nuts		2,043	2,677		2,477		2,102	3,364	2,459	
Kunar	Nuts	1,600	1,280			920		1,600	1,280	920	
Paktia	Nuts			1,119		1,088					
Paktika	Nuts			4,288		3,393			3,667	3,617	
Peshawar	Nuts	4,700	4,600	1,600		4,135		4,700	4,600	1,800	5,079
Wardak	Nuts	8,500		5,188		4,899					
Kunar	Pulses	1,300	1,080			764		1,300	1,080		629
Peshawar	Pulses		980						980		
Helmand	Rice		1,300	1,328		1,809		1,250	1,278	2,098	2,126
Kunar	Rice		910			1,100		875		1,035	1,300
Logar	Rice		720			1,185		700		1,333	1,429
Paktia	Rice		510	650		421		510	646	400	467
Paktika	Rice		450	485		816		440	425	933	1,087
Peshawar	Rice		914	1,049				903	1,032		
Wardak	Rice		921	1,091		1,802		918	1,079	2,616	2,727
Paktia	Rice Thin		940	980		1,211		940	972	1,133	1,222

(continued)

Table 2-7. (continued)

Province	Commodity	December 1989 Prices					June 1989 Prices				
		Pakistan Retail	Pakistan Wholesale	Border	Afghanistan Wholesale	Afghanistan Retail	Pakistan Retail	Pakistan Wholesale	Border	Afghanistan Wholesale	Afghanistan Retail
Paktika	Rice Thin			1,223	1,711	1,842			1,183	2,120	2,238
Peshawar	Rice Thin		850	910			830	890			
Paktia	Salt		150	165	320	357	95	114	152	214	
Paktia	Seeds	4,887	4,511	3,387	3,383						
Peshawar	Seeds	3,000	2,400	2,105			2,500	2,200	2,667		
Logar	Sheep		1,400	26,100	26,000			1,400	22,000	21,000	
Helmand	Spices	8,238	7,488	7,545	7,427		8,580	7,830	9,677	9,526	
Kunar	Spices	1,000	3,400		3,684		1,000	3,400		4,667	
Peshawar	Spices		7,429	4,511	3,477			7,771	5,714	4,333	
Wardak	Spices		15,000	9,211	6,155			16,000	12,000	11,000	
Helmand	Sugar		1,213	1,244	1,751	1,832		1,170	1,203	2,040	2,135
Kunar	Sugar		1,100		1,800	1,300		1,090		1,800	1,300
Logar	Sugar		1,050	1,100	1,632	1,842		970	1,020	1,833	2,000
Paktia	Sugar		1,115	1,120	1,474	1,579		1,115	1,120	1,467	1,667
Paktika	Sugar			1,100	1,584	1,712			1,100	1,967	2,133
Peshawar	Sugar		1,060	1,140				1,063	1,133		
Wardak	Sugar		1,040	1,145	1,474	1,474		1,025	1,120	1,867	2,000
Helmand	Sugar Brown	2,169	1,719	1,076	947		2,149	1,899	1,275	1,111	
Paktia	Sugar Brown		788	788	977	1,015		1,143	1,179	1,429	1,524
Paktika	Sugar Brown			667	1,051	1,122			930	1,593	1,684
Peshawar	Sugar Brown		581	677				960	905		
Wardak	Sugar Brown		600	667	1,737	1,719		633	700	2,400	
Peshawar	Sweets		1,087	1,147				1,180	1,247		
Helmand	Tractor		108,000	111,700	142,211		102,000	105,500	160,000		
Paktika	Tractor			95,500	84,474			90,000	68,333		
Helmand	Urea		249	281	538	558		240	239	588	618
Kunar	Urea		300		420	500		260		380	460
Nangarhar	Urea		297	470	509	579		260	529	573	667
Paktika	Urea			240	621	647			240	787	823
Peshawar	Urea		305					270			
Wardak	Urea							160	190	333	333
Helmand	Vegetables		3,683	1,158	1,360	688		1,313	1,490	2,177	937
Kandahar	Vegetables		2,000	1,883	1,692			2,018	1,932	1,867	
Paktia	Vegetables		375	469	481	526		188	281	292	333
Paktika	Vegetables			140	389	509			160	604	738
Helmand	Wheat		251	273	500	524		224	245	560	600
Kandahar	Wheat		250	272	500	524		224	245	560	600
Paktika	Wheat		376	416	746	777		376	406	929	902
Peshawar	Wheat		230	258				232	260		
Quetta	Wheat		250	272	497	515		224	245	560	593
Wardak	Wheat		260	294	736	671		256	289	1,057	967
Kunar	Wheat Flour		300		345	391		272		300	346
Logar	Wheat Flour		314	314	556	541		295	291	635	667
Paktia	Wheat Flour		366	350	503	538		350	249	435	461
Paktika	Wheat Flour		400	409	709	780		393	403	840	934
Peshawar	Wheat Flour		267	305				260	301		
Wardak	Wheat Flour		278	367	812	804		270	350	1,158	1,119
Helmand	Wool		2180	2374	2168			2228	2610	2698	
Kandahar	Wool		2530	1694	1553			2520	2111	1933	
Paktika	Wool				3008					4762	

[a] All prices are in Pakistani rupees per 100 kilograms, except for tractors and sheep which are priced in rupees per unit. Prices originally expressed in afghanis were converted at the prevailing rates in December and June 1989, which were 19 and 15 afghanis per rupee respectively.

Note: Price data for hides and wood have not been included here since the survey data do not contain standardized units of measure for these two commodities.

Source: Nathan-Berger joint venture survey of cross-border trade, February 1990.

Table 2-8. Unadjusted Average Per Kilo Transportation Cost, Distance, and Time Between Afghanistan and Pakistan for Selected Commodities

Province	Commodity	Direction	December		June Cost	Currency	Distance (Kms.)	Dec. Time (Hours)	June Time (Hours)	December Cost/Km	June Cost/Km
			Cost	Cost							
Helmand	Cooking Oil	Border	Afghan.	25.00	20.00	Afghani	340	30	24	0.073529	0.058824
Nangarhar	Cooking Oil	Border	Afghan.	2.67	2.67	Afghani	40	1.5	1.5	0.066667	0.066667
Paktia	Cooking Oil	Border	Afghan.	10.00	6.25	Afghani	63	6	4	0.15873	0.099206
Paktika	Cooking Oil	Border	Afghan.	45.63	38.96	Afghani	151	53	31	0.302863	0.257434
Peshawar	Cooking Oil	Border	Afghan.	19.69	19.69	Rupee					
Wardak	Cooking Oil	Border	Afghan.	32.81	20.00	Afghani	330	64	58	0.099432	0.060606
Helmand	Cooking Oil	Pakistan	Border	5.16	5.16	Rupee	125	4.5	4	0.041276	0.041276
Kunar	Cooking Oil	Pakistan	Border	0.80	0.80	Rupee		4	4		
Nangarhar	Cooking Oil	Pakistan	Border	0.09	0.09	Rupee	60	2.25	2.25	0.001524	0.001524
Paktia	Cooking Oil	Pakistan	Border	0.34	0.34	Rupee	82	4	4	0.004167	0.004167
Peshawar	Cooking Oil	Pakistan	Border	0.32	0.32	Rupee	312	19	19	0.001017	0.001028
Wardak	Cooking Oil	Pakistan	Border	0.25	0.25	Rupee	67	5	4.4	0.003731	0.003731
Paktika	Cotton	Border	Afghan.	5.29	4.29	Afghani		55	18		
Helmand	DAP	Border	Afghan.	22.00	20.00	Afghani	340	30	24	0.064708	0.058824
Kunar	DAP	Border	Afghan.	0.80	0.80	Rupee		4	4		
Paktika	DAP	Border	Afghan.	42.00	36.00	Afghani	150	61	20	0.28	0.24
Helmand	DAP	Pakistan	Border	0.30	0.30	Rupee	125	4.5	4	0.0024	0.0024
Helmand	Fruit Dried	Afghan.	Border	31.52	31.03	Afghani	340	32	31	0.092717	0.091261
Logar	Fruit Dried	Afghan.	Border	41.43	30.71	Afghani	343	17	16	0.120959	0.089677
Paktia	Fruit Dried	Afghan.	Border	3.57	0.00	Afghani	75	8		0.047619	0
Paktika	Fruit Dried	Afghan.	Border	57.14	28.57	Afghani	150	70	19	0.380952	0.190476
Peshawar	Fruit Dried	Afghan.	Border	27.14	28.57	Afghani	345	21		0.078675	0.082816
Wardak	Fruit Dried	Afghan.	Border	30.00	28.57	Afghani	334	81	120	0.089888	0.085607
Helmand	Fruit Dried	Border	Pakistan	0.58	0.60	Rupee	125	4	4	0.004641	0.004829
Logar	Fruit Dried	Border	Pakistan	0.50	0.45	Rupee	120	5	5	0.004167	0.00375
Paktia	Fruit Dried	Border	Pakistan	0.36	0.00	Rupee	300	10.5		0.00119	0
Wardak	Fruit Dried	Border	Pakistan	0.29	0.29	Rupee	67	5	4.5	0.004391	0.004264
Peshawar	Fruit Dried	Pakistan	Border	1.31	2.13	Rupee	322	31	28	0.004071	0.006626
Helmand	Fruits	Afghan.	Border	22.75	17.80	Afghani	340	30	25	0.066912	0.052353
Logar	Fruits	Afghan.	Border	42.86	0.00	Afghani	375	21		0.114286	0
Helmand	Fruits	Border	Pakistan	1.20	1.20	Rupee	125	4.5	4	0.0096	0.0096
Paktia	Fruits	Border	Afghan.	2.50	0.00	Afghani	30	1.5	1.5	0.083333	0
Paktika	Fruits	Border	Afghan.	35.71	0.00	Afghani		64	19		
Wardak	Fruits	Border	Afghan.	38.93	0.00	Afghani	330	77	120	0.117965	0
Paktia	Fruits	Pakistan	Border	0.05	0.00	Rupee	35	1.5		0.001429	0
Paktika	Fruits	Pakistan	Border	0.25	0.00	Rupee					
Wardak	Fruits	Pakistan	Border	0.29	0.00	Rupee	67	33.75	72	0.004264	0
Helmand	Fuels	Border	Afghan.	143.11	126.20	Afghani	340	30	24	0.420915	0.37119
Logar	Fuels	Border	Afghan.	21.25	20.00	Afghani	350	19	18	0.060714	0.057143
Nangarhar	Fuels	Border	Afghan.	2.86	2.86	Afghani	38	1.5	1.5	0.07619	0.07619
Paktia	Fuels	Border	Afghan.	3.75	3.00	Afghani	53	4	4	0.071429	0.057143
Paktika	Fuels	Border	Afghan.	32.50	22.25	Afghani	150	60	20	0.216667	0.148333
Wardak	Fuels	Border	Afghan.	42.50	27.50	Afghani	330	83	62	0.128788	0.083333
Helmand	Fuels	Pakistan	Border	0.33	0.33	Rupee	125	5	4	0.002667	0.002617
Kunar	Fuels	Pakistan	Border	0.93	0.93	Rupee		3.5	3.5		
Logar	Fuels	Pakistan	Border	0.35	0.35	Rupee	22	1.5	1.5	0.015909	0.015909
Nangarhar	Fuels	Pakistan	Border	0.07	0.07	Rupee	8	0.5	0.5	0.009167	0.009167
Wardak	Fuels	Pakistan	Border	0.50	0.50	Rupee	67	5	4	0.007463	0.007463
Logar	Meat Animals	Border	Afghan.	2.50	2.00	Rupee	380	20	20	0.006579	0.005263
Paktika	Meat Animals	Border	Afghan.	1,500	1,250	Afghani					
Helmand	Nuts	Afghan.	Border	37.46	38.27	Afghani	340	30	26	0.110177	0.106675
Kunar	Nuts	Afghan.	Border	0.07	0.07	Rupee		2.5	2.5		

(continued)

Table 2-8. (continued)

Province	Commodity	Direction	December Cost	June Cost	Currency	Distance (Kms.)	Dec. Time (Hours)	June Time (Hours)	December Cost/Km	June Cost/Km
Paktia	Nuts	Afghan. Border	3.17	0.00	Afghani	75	7		0.042328	0
Paktika	Nuts	Afghan. Border	57.14	28.57	Afghani	150	62.5	18.25	0.380952	0.190473
Wardak	Nuts	Afghan. Border	26.43	0.00	Afghani	330	23.5	3	0.080087	0
Helmand	Nuts	Border Pakistan	0.86	0.74	Rupee	125	4	4	0.006842	0.00589
Paktika	Nuts	Border Pakistan	18.57	20.00	Rupee					
Peshawar	Nuts	Border Pakistan	0.67	0.59	Rupee	500	35	34	0.001343	0.001183
Wardak	Nuts	Border Pakistan	2.36	2.14	Afghani	67	5	4	0.035181	0.031983
Kunar	Pulses	Afghan. Border	0.07	0.07	Rupee		2	2		
Peshawar	Pulses	Pakistan Border	0.16	0.16	Rupee	280				
Helmand	Rice	Border Afghan.	25.00	22.00	Afghani	340	24	24	0.073529	0.064706
Logar	Rice	Border Afghan.	42.86	36.43	Afghani	300	20	19	0.142857	0.121429
Paktia	Rice	Border Afghan.	3.00	2.25	Afghani	80	19	15	0.0375	0.028125
Paktika	Rice	Border Afghan.	51.00	48.00	Afghani		63	19		
Wardak	Rice	Border Afghan.	40.83	22.38	Afghani	334	73	44	0.122195	0.066975
Helmand	Rice	Pakistan Border	0.25	0.25	Rupee	125	4.5	4	0.002	0.002
Kunar	Rice	Pakistan Border	0.80	0.80	Rupee		4	4		
Paktia	Rice	Pakistan Border	0.10	0.10	Rupee	48	2	2	0.002089	0.002089
Paktika	Rice	Pakistan Border	0.20	0.20	Rupee	57	7	5	0.003509	0.003509
Wardak	Rice	Pakistan Border	0.10	0.09	Rupee	67	5	4	0.001526	0.001346
Paktia	Salt	Border Afghan.	5.71	5.71	Afghani	70	7	6	0.081633	0.081633
Paktia	Salt	Pakistan Border	1.43	1.43	Afghani	35	1	1	0.040816	0.040816
Paktia	Seeds	Afghan. Border	3.17	0.00	Afghani	75	7		0.042328	0
Paktia	Seeds	Border Pakistan	0.36	0.00	Rupee	300	10.5		0.00119	0
Peshawar	Seeds	Border Pakistan	0.71	0.71	Rupee					
Helmand	Spices	Afghan. Border	22.26	22.61	Afghani	340	30	28	0.065478	0.066507
Kunar	Spices	Afghan. Border	0.07	0.07	Rupee		2	2		
Peshawar	Spices	Afghan. Border	26.00	26.00	Afghani	360	5	5	0.072222	0.072222
Wardak	Spices	Afghan. Border	25.71	20.00	Afghani	335	48	32	0.076759	0.059701
Helmand	Spices	Border Pakistan	1.00	1.00	Rupee	125	4.5	4	0.008	0.008
Peshawar	Spices	Border Pakistan	0.59	0.59	Rupee		28	27		
Wardak	Spices	Border Pakistan	2.86	2.29	Afghani	67	5	4.5	0.042644	0.034115
Helmand	Sugar	Border Afghan.	22.23	14.20	Afghani	340	30	24	0.065379	0.041765
Logar	Sugar	Border Afghan.	42.86	35.00	Afghani	325	20	20	0.131868	0.107692
Paktia	Sugar	Border Afghan.	5.00	4.00	Afghani	75	7	5	0.066667	0.053333
Paktika	Sugar	Border Afghan.	36.00	27.80	Afghani	150	58	22	0.24	0.185333
Peshawar	Sugar	Border Afghan.	21.43	21.43	Rupee					
Wardak	Sugar	Border Afghan.	36.43	25.36	Afghani	330	79	52	0.11039	0.07684
Helmand	Sugar	Pakistan Border	0.29	0.29	Rupee	125	4.5	4	0.00234	0.00234
Kunar	Sugar	Pakistan Border	0.80	0.80	Rupee		4	4		
Paktia	Sugar	Pakistan Border	0.10	0.10	Rupee	36	1	1	0.002857	0.002857
Peshawar	Sugar	Pakistan Border	0.19	0.19	Rupee	483	15	16	0.000398	0.000398
Wardak	Sugar	Pakistan Border	0.10	0.09	Rupee	67	5	5	0.001493	0.001343
Helmand	Sugar Brown	Afghan. Border	24.45	24.45	Afghani	340	30	24	0.071912	0.071912
Helmand	Sugar Brown	Border Pakistan	0.78	0.78	Rupee	125	4.5	4	0.00624	0.00624
Paktia	Sugar Brown	Border Afghan.	5.71	4.29	Afghani	75	5	7	0.07619	0.057143
Paktika	Sugar Brown	Border Afghan.	33.33	33.33	Afghani		62	20		
Wardak	Sugar Brown	Border Afghan.	42.86	21.43	Afghani	330	79	120	0.12987	0.064935
Peshawar	Sugar Brown	Pakistan Border	0.36	0.40	Rupee	433	22	20	0.000897	0.000916
Wardak	Sugar Brown	Pakistan Border	0.16	0.16	Rupee	67	5	5	0.002388	0.002388
Peshawar	Sweets	Pakistan Border	0.54	0.54	Rupee		38	38		
Paktia	Tea	Border Afghan.	10.00	6.00	Afghani	75	7	5	0.133333	0.08
Paktia	Tea	Pakistan Border	1.80	1.60	Rupee	284	10	10	0.006338	0.005834

(continued)

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Table 2-8. (continued)

Province	Commodity	Direction	December Cost	June Cost	Currency	Distance (Kms.)	Dec. Time (Hours)	June Time (Hours)	December Cost/Km	June Cost/Km
Paktika	Tractor [a]	Afghan. Border	57,500	40,000	Afghani	150	89	18	383.3333	266.6667
Helmand	Tractor [a]	Border Afghan.	60,000	50,000	Afghani	340	4.5	4	176.4706	147.0588
Helmand	Tractor [a]	Pakistan Border	3,500	3,000	Rupee	125	4.5	4	28	24
Helmand	Urea	Border Afghan.	20.00	18.50	Afghani	340	30	24	0.058824	0.054412
Nangarhar	Urea	Border Afghan.	3.07	3.00	Afghani	40	2	2	0.076667	0.075
Paktika	Urea	Border Afghan.	42.00	36.00	Afghani	150	41.5	38	0.28	0.24
Wardak	Urea	Border Afghan.	0.00	10.89	Afghani			86		
Helmand	Urea	Pakistan Border	0.30	0.27	Rupee	125	4.5	4	0.0024	0.00216
Kunar	Urea	Pakistan Border	0.80	0.80	Rupee		4	4		
Nangarhar	Urea	Pakistan Border	0.73	0.73	Rupee	60	2	2	0.012222	0.012222
Peshawar	Urea	Pakistan Border	0.07	0.07	Rupee	60	2.5	2.5	0.001173	0.001191
Wardak	Urea	Pakistan Border	0.00	0.30	Rupee			4		
Kandahar	Vegetables	Afghan. Border	35.71	39.29	Afghani	340	30	24	0.105042	0.115546
Helmand	Vegetables	Border Afghan.	31.24	33.52	Afghani	340	32	30	0.091891	0.098599
Kandahar	Vegetables	Border Pakistan	0.71	0.89	Rupee	125	4	4	0.005714	0.007143
Paktika	Vegetables	Border Afghan.	8.44	5.63	Afghani	45	4	3	0.1875	0.125
Paktika	Vegetables	Border Afghan.	33.33	24.00	Afghani	150	63	21	0.222222	0.16
Helmand	Vegetables	Pakistan Border	0.61	0.55	Rupee	125	4.5	4	0.004848	0.00437
Paktika	Vegetables	Pakistan Border	0.28	0.28	Rupee	60	3	3	0.004688	0.004688
Helmand	Wheat	Border Afghan.	22.00	18.48	Afghani	340	30	24	0.064706	0.054338
Kandahar	Wheat	Border Afghan.	22.00	18.60	Afghani	340			0.064706	0.054706
Paktika	Wheat	Border Afghan.	52.94	47.06	Afghani	150	60	21	0.352941	0.313725
Quetta	Wheat	Border Afghan.	21.33	18.67	Afghani	340	32	28	0.062745	0.054902
Wardak	Wheat	Border Afghan.	40.00	24.76	Afghani	337	68	45	0.118812	0.07355
Helmand	Wheat	Pakistan Border	0.21	0.20	Rupee	125	4.5	4	0.00164	0.00156
Kandahar	Wheat	Pakistan Border	0.21	0.20	Rupee	125	4.5	4	0.00164	0.001568
Paktika	Wheat	Pakistan Border	0.24	0.24	Rupee	58	6	4	0.004057	0.004057
Peshawar	Wheat	Pakistan Border	0.14	0.13	Rupee	750	5	4	0.000187	0.000178
Quetta	Wheat	Pakistan Border	0.22	0.19	Rupee	125	4.5	4	0.001739	0.001483
Wardak	Wheat	Pakistan Border	0.11	0.09	Rupee	97	5	4	0.001584	0.001397
Logar	Wheat Flour	Border Afghan.	17.14	31.19	Afghani	377	20	19	0.098809	0.082807
Paktika	Wheat Flour	Border Afghan.	4.39	3.16	Afghani	85	11	7	0.051607	0.037173
Paktika	Wheat Flour	Border Afghan.	45.88	35.29	Afghani	150	60	24	0.305882	0.235294
Wardak	Wheat Flour	Border Afghan.	40.00	22.86	Afghani	335	79	51	0.119403	0.08623
Kunar	Wheat Flour	Pakistan Border	0.80	0.80	Rupee		4	4		
Logar	Wheat Flour	Pakistan Border	0.06	0.06	Rupee	25	1.5	1.5	0.0024	0.0024
Paktika	Wheat Flour	Pakistan Border	0.13	0.14	Rupee	123	5	5	0.00109	0.001139
Paktika	Wheat Flour	Pakistan Border	1.09	0.87	Rupee	58	34	13	0.018804	0.015033
Peshawar	Wheat Flour	Pakistan Border	0.25	0.25	Rupee	303	12	12	0.000812	0.000816
Wardak	Wheat Flour	Pakistan Border	0.13	0.11	Rupee	67	5	5	0.001935	0.001603
Helmand	Wool	Afghan. Border	35.75	35.70	Afghani	340	33	31	0.105197	0.104989
Kandahar	Wool	Afghan. Border	26.60	26.50	Afghani	340	30	25	0.078824	0.077941
Paktika	Wool	Afghan. Border	57.14	28.57	Afghani		50	17		
Helmand	Wool	Border Pakistan	0.69	0.69	Rupee	125	5	4	0.005531	0.005531
Kandahar	Wool	Border Pakistan	0.50	0.50	Rupee	125	4.5	4	0.004	0.004

[a] Transportation costs per tractor.

Source: Nathan-Berger joint venture survey of cross-border trade, February 1990.

Table 2-9. Adjusted Average Transportation Cost per 100 Kilograms
Between Afghanistan and Pakistan for Selected Commodities
(Rupees)

Province	Commodity	Direction	December		Distance (Kms.)	June	
			Cost	Cost		Cost/Km.	Cost/Km.
Helmand	Cooking Oil	Border Afghan.	132	133	340	0.3869989	0.3921569
Nangarhar	Cooking Oil	Border Afghan.	21	27	40	0.5263158	0.6666667
Paktia	Cooking Oil	Border Afghan.	59	42	63	0.8354219	0.6613757
Paktika	Cooking Oil	Border Afghan.	241	260	151	1.5975369	1.7200147
Wardak	Cooking Oil	Border Afghan.	173	133	330	0.5233254	0.4040404
Helmand	Cooking Oil	Pakistan Border	94	94	125	0.7504	0.7504
Kunar	Cooking Oil	Pakistan Border	80	80			
Nangarhar	Cooking Oil	Pakistan Border	29	23	60	0.3854167	0.3854167
Paktia	Cooking Oil	Pakistan Border	27	27	82	0.3315549	0.3315549
Peshawar	Cooking Oil	Pakistan Border	25	26	312	0.0802083	0.0822115
Wardak	Cooking Oil	Pakistan Border	25	25	87	0.3731343	0.3731343
Kunar	Pulses	Border Afghan.	7	7			
Peshawar	Pulses	Pakistan Border	18	16	260	0.0632653	0.0571429
Helmand	Rice	Border Afghan.	193	147	340	0.3882353	0.4323529
Logar	Rice	Border Afghan.	228	243	300	0.7518797	0.8095238
Paktia	Rice	Border Afghan.	16	15	80	0.1973684	0.1875
Paktika	Rice	Border Afghan.	288	320			
Wardak	Rice	Border Afghan.	215	149	334	0.6434499	0.4467256
Helmand	Rice	Pakistan Border	25	25	125	0.2	0.2
Kunar	Rice	Pakistan Border	80	80			
Paktia	Rice	Pakistan Border	10	10	48	0.2083333	0.2083333
Paktika	Rice	Pakistan Border	20	20	57	0.3508772	0.3508772
Peshawar	Rice	Pakistan Border	20	19			
Wardak	Rice	Pakistan Border	10	9	87	0.1526459	0.1345545
Helmand	Sugar	Border Afghan.	117	122	340	0.3441022	0.3578431
Logar	Sugar	Border Afghan.	226	233	325	0.6940428	0.7179487
Paktia	Sugar	Border Afghan.	26	27	75	0.3508772	0.3555556
Paktika	Sugar	Border Afghan.	189	165	150	1.2631579	1.2355556
Peshawar	Sugar	Border Afghan.	113	143			
Wardak	Sugar	Border Afghan.	102	169	330	0.5809979	0.5122655
Helmand	Sugar	Pakistan Border	29	29	125	0.234	0.234
Kunar	Sugar	Pakistan Border	80	80			
Paktia	Sugar	Pakistan Border	10	10	35	0.2857143	0.2857143
Peshawar	Sugar	Pakistan Border	19	19	493	0.0398551	0.0398551
Wardak	Sugar	Pakistan Border	10	9	87	0.1492537	0.1343284
Helmand	Sugar Brown	Afghan. Border	129	163	340	0.376483	0.4794118
Helmand	Sugar Brown	Border Pakistan	78	78	125	0.624	0.624
Paktia	Sugar Brown	Border Afghan.	30	29	75	0.4010025	0.3809524
Paktika	Sugar Brown	Border Afghan.	178	222			
Wardak	Sugar Brown	Border Afghan.	226	143	330	0.683527	0.4329004
Peshawar	Sugar Brown	Pakistan Border	42	45	433	0.0970417	0.1028263
Wardak	Sugar Brown	Pakistan Border	15	16	87	0.2288557	0.238808
Helmand	Wheat	Border Afghan.	116	123	340	0.3405573	0.3622549
Kandahar	Wheat	Border Afghan.	116	124	340	0.3405573	0.3647059
Paktika	Wheat	Border Afghan.	279	314	150	1.8575851	2.0915033
Quetta	Wheat	Border Afghan.	112	124	340	0.3302374	0.3680131
Wardak	Wheat	Border Afghan.	211	165	337	0.6247072	0.4898497
Helmand	Wheat	Pakistan Border	21	20	125	0.164	0.158
Kandahar	Wheat	Pakistan Border	21	20	125	0.164	0.1588
Paktika	Wheat	Pakistan Border	24	24	58	0.4056795	0.4056795
Peshawar	Wheat	Pakistan Border	14	13	750	0.0188667	0.0177778
Quetta	Wheat	Pakistan Border	22	19	125	0.1733333	0.1482867
Wardak	Wheat	Pakistan Border	11	9	87	0.1583748	0.1397181
Logar	Wheat Flour	Border Afghan.	195	208	377	0.5185377	0.5515557
Paktia	Wheat Flour	Border Afghan.	23	21	85	0.2716133	0.2478168
Paktika	Wheat Flour	Border Afghan.	241	235	150	1.6066667	1.5666667
Wardak	Wheat Flour	Border Afghan.	211	152	335	0.6298507	0.4537313
Kunar	Wheat Flour	Pakistan Border	80	80			
Logar	Wheat Flour	Pakistan Border	6	6	25	0.24	0.24
Paktia	Wheat Flour	Pakistan Border	13	14	123	0.1090387	0.1139168
Peshawar	Wheat Flour	Pakistan Border	26	27	303	0.0874037	0.087815
Wardak	Wheat Flour	Pakistan Border	13	11	87	0.1934771	0.1803098

Note: Data have been adjusted to exclude outliers; exchange rate used for conversion from afghanis to rupees was 19 and 15 afghanis per rupee for December and June respectively.

Source: Nathan-Berger joint venture survey of cross-border trade, February 1990.

and unrefined level we note the correspondence between distance from major market centers and transport costs per kilogram and per kilometer. Our interpretation, supported by informal interviews of Afghan and Pakistani transporters, is that this relationship is due not only to infrastructural difficulties but to the transaction costs imposed by combatants in certain areas of the country. Chapter 6 includes further analysis of the transport cost issue.

Conclusions

Initial estimates formed by averaging survey observations yield results within expected ranges, although the variance of the observations is high. Removing extreme values from the calculation reduces variances considerably while changing overall averages only slightly. Our conclusion is that the resulting survey responses yield consistent and reasonable estimates of the trade volumes, prices, and transport costs of interest for this study.

Chapter 3

PAKISTAN SURVEYS

In addition to the cross-border interviews conducted by the Afghan survey team, two types of interviews were conducted in Pakistan by the expatriate team: (1) interviews of the non-governmental organizations (NGOs) carrying out cross-border transfers of goods and (2) interviews of importers and exporters inside Pakistan.

In contrast to similar interviews carried out by the expatriate team during Phase I, the Phase II Pakistan-based survey did not include quantitative estimates of trade, on the presumption that volume and price issues would be covered adequately by the formal survey. Instead the team concentrated on production and trade conditions inside Afghanistan, changes in the process of cross-border trade, and the operations of NGOs.

Conditions Inside Afghanistan

In general, both private sector and NGO interviewees reported that consumption and trade conditions were well above subsistence levels inside Afghanistan, although several current events and prospective developments could substantially change that pattern.

The major condition for concern reported was the difficulty of inter-regional trade in Afghanistan, which is low even relative to levels as recent as 1 year ago. No quantitative comparison over time is possible on the basis of either these interview results or any other data source of which we are aware, but respondents ascribed the fall-off in trade to increasing transport costs (which we confirmed with our interview data) and other "transaction costs" resulting from continuing civil war. NGO officials reported transport costs in the northern provinces of Afghanistan to be at prohibitive levels, a situation that has led to localized shortages and price spikes in certain areas, even in the context of generally sufficient grain supplies (including imports) inside that country. Some respondents quoted wheat prices from 2400 to 3000 afghanis per seer in the northern provinces, levels 2 to 3 times the current Kabul price.

Another cause for concern emphasized by NGO interviewees was the worsening of Afghan grain crop conditions. Sunnpest, locust, and drought have damaged the winter wheat crop in the northern provinces, and production shortfalls may develop by late summer 1990. Whereas grain production during 1989 was presumed to have increased over 1988 levels, the 1990 crop is in doubt.

These factors could lead to a change in the pattern of generally sufficient levels of locally grown and imported wheat supplies in Afghanistan. As imported food supplies become more difficult to transport to affected areas and domestic production decreases, certain provinces, especially in the north central regions, could experience serious food shortages.

For purposes of this report, we emphasize that these observations must be considered second-hand knowledge: our own enumerators did not penetrate the areas of Afghanistan indicated, and they did not collect production data. Although we consider the NGO officials and traders that we interviewed to be reliable (they based their statements on phenomena they had observed), their methods of observation and reporting may differ from those employed in formal surveys.

Cross-border Trading Process

As was shown in the Phase I report, the trading system along the Afghan-Pakistani border is of several generations standing—and in some respects, prevailed over several centuries. Still, certain elements were reported to be changing because of the effects of refugee migration, route closures, and dislocations of partnerships. The Phase II interviews and survey confirmed some changes in the trading process and identified others.

The structure of the Pakistan-based export market is changing in terms of both geography and individual participation, due in part to the closing of standard trading routes during the siege of Jalalabad beginning in October 1988. Many Pakistani exporters now bypass Peshawar altogether, sending goods directly to Parachinar or Wana. Markets in those areas are now as large as those in Peshawar, and our enumerators indicated that most traders are found at these border markets. Wheat, in particular, is often sold wholesale at these staging areas, and certain bazaars in Peshawar no longer deal in wholesale quantities of grain for export.

The geographical shifts in Pakistani export markets, as well as the return of Afghan refugees, have brought about changes in the type and size of market participants. More small traders and more Afghans now tend to be involved in cross-border trade, including supplies originating far inside Pakistan. This observation may be biased by the fact that our enumerators were Afghans and were more familiar with small Afghan traders, but the interviews conducted by the expatriate team confirmed the conclusion.

NGO Operations

Many of the preceding findings were confirmed by NGO officials as well as by private sector interviewees. The following conclusions from the Peshawar-area surveys relate entirely to the operations of the NGOs and public sector agencies and contractors.

The statistical information currently available on the operation of Peshawar-based NGOs is not as extensive as we originally expected it might be. During January 1989, most private voluntary organizations (PVOs) and other Afghanistan-oriented agencies and contractors operating out of Peshawar were threatened with cessation of their activities by the Government of Pakistan's Commissioner (Security) for Afghan Refugees (NWFP) on the grounds that they might be illegally exporting proscribed products from Pakistan. Therefore these organizations were reluctant to release information on their cross-border activities. The statistics quoted in this report are complete only for the three most active NGO shippers of target commodities; the remaining shipments are estimated on the basis of surveys by the Agency Coordinating Body for Afghan Relief (ACBAR). Table 3-1 summarizes the available data on NGO and international relief agency shipments across the Afghan-Pakistani border.⁵

As Table 3-1 indicates, NGO shipments of commodities of interest for this study are quite low in comparison to A.I.D. and private sector shipments. Most of the edible wheat shipped by PVOs, for example, was donated by the UN World Food Program (WFP), amounting to only 8,806 metric tons during 1989. The PVOs and the UN shipped only about 10,000 metric tons of food during 1989 (all of which is ascribed to the UN in Table 3-1), compared with about 90,000 tons by A.I.D.

In keeping with their stated objectives, however, NGOs as a group shipped many more agricultural inputs than other agencies, amounting to some 54,000 tons during 1989. These materials consisted of seed, fertilizer, tractors and related equipment, tools, and draft animals. Total PVO and UN shipments of all products during 1989 amounted to about 72,500 metric tons.

Finally, to emphasize the importance of NGO activity in general, we note that in addition to shipping commodities, these organizations also take part in on-site training, for which they maintain individuals and services across the border, as well as products.

⁵ The activities of the Islamic relief agencies are noticeably absent from this and all other reports with which we are familiar. These groups apparently do not share information even with ACBAR.

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**Table 3-1. Public Sector and NGO Shipments
of Target Commodities to Afghanistan during 1989
(metric tons)**

PRODUCT	ORGANIZATION				
	A.I.D.	U.N.	PVOs	VITA	Total
Food					
Wheat and Flour	75,000	8,806			83,806
Rice					
Fruit					
Sugar	1,142	48			1,190
Vegetables					
Ghee	10,431	100			10,531
Legumes	3,667	149			3,816
Salt	242				242
Food Animals					
Other Food	385	90			475
Other Ag. Outputs					
Wool Products					
Leather Products					
Ag. Inputs					
Seed		3,153	928		4,081
Fertilizer		5,683	3,376		9,059
Tractors			240		240
Threshers			10		10
Other Ag. Eqpt.					
Traction Animals			18,000		18,000
Other Ag. Inputs					
Fuels					
Construction Materials			32,000		32,000
TOTAL TARGET SHIPMENTS	90,867	18,029	54,554		163,450

Note: The NGO data utilized for this table are taken from interviews with the three largest such organizations operating in Peshawar and with ACBAR. These interviews indicate that total NGO activity is approximately double that of these three groups, for each commodity, which is the basis for the total NGO estimate presented here.

Interviews of Pakistan Exporters

Until late 1988 the bulk of commercial exports from Pakistan to Afghanistan were transported using the paved road between Peshawar and Kabul, across the Khyber Pass. The siege of Jalalabad by the Mujahidiin in October 1988 effectively put a stop to commercial trade using that highway.

Before the Jalalabad siege, the long-standing trade between Pakistan and Afghanistan had been mainly in the hands of well-established trading houses based in Peshawar, acting in concert with correspondent traders in Kabul, often belonging to the same families. Many of the traders previously were engaged in exporting goods to Afghanistan have now redirected their business to other pursuits, notably to expanding their activities in Peshawar and elsewhere in Pakistan.

It was therefore difficult for the survey team to locate Peshawar-based traders that were currently exporting to Afghanistan. In many instances firms and individuals claimed to be active in Afghanistan, but on closer inquiry we found that their activities had taken place before the Jalalabad siege in October 1988.

At the time of the field visits in January and February 1990, the expatriate team was not permitted to leave the Peshawar area for security reasons. It was not possible then to determine whether and to what extent large-scale exporters from Afghanistan have shifted their operations to other smaller towns in Pakistan, using alternative routes.

In Afghanistan importers of products from Pakistan were in large part Afghans who had traveled to Pakistan to purchase the merchandise and then returned to sell it in the Afghan markets. They were in effect playing the role of both exporter and importer. Nevertheless, the enumerators were also able to contact merchants in Peshawar that were dealing in the commodities being exported to Afghanistan and were able to obtain their perspective on the volumes and prices of these exports.

Chapter 4

FOODGRAIN BALANCE ASSESSMENT

This analysis addresses the current foodgrain balance situation in Afghanistan province by province, in several stages. First, the estimates of population currently living in each province are considered, making allowances for refugees and displaced persons. Next, estimates of provincial grain production are made, based on data available from the Swedish Committee for Afghanistan Agricultural Survey. Consumption requirements for the in-country population are then compared with estimated production to arrive at province-by-province estimates of grain surplus or deficits. Finally, the provincial balances are aggregated to provide a picture of the national balance.

The methodology for arriving at estimates of foodgrains production is developed in detail in another study. (See "Afghanistan Regional Foodgrain Situation—The AFGRAIN Model," Nathan Associates Inc. and Louis Berger International, Inc., February 1990.)

In-Province Population

There is much uncertainty regarding the population of Afghanistan, and more so about what portions of it have either died during the war or taken refuge in Pakistan, Iran, and major Afghan cities. The recently released study of the Afghanistan population by Thomas H. Eighmy, "The Population of Afghanistan, Inside and Out," USAID, 1990, is agreed by all observers to be the most definitive accounting available of the population of Afghanistan.

The point of departure for all population estimates is the 1978 Afghanistan population census. Current year figures (that is, 1989) are mere extrapolations from the 1978 data using an assumed annual rate of growth of 2 percent. Table 4-1 presents the estimates of each province's population in 1989, for a national total of 16.7 million people.

The main adjustment in these data concerns the refugee population. There has been no recent census of Afghan refugees in Pakistan, some of whom are registered in camps and outside, but many of whom are not

Table 4-1. Estimated Wheat Production Deficit in Afghanistan During 1989
Based on Population, Consumption, and Production Estimates

Region/ Province	ADAPTED EIGHTHMY POPULATION ESTIMATES (1000's)					REQUIRED CONSUMPTION At 180 kg pc/c (1000's Tons)	ADAPTED SCA PROD. ESTIMATES Net Wheat Production By Type of Crop			DEFICIT OR SURPLUS
	Tot. 1989 Popln.	Refugees Pakistan	Refugees Iran	Total Refugees	Net 1989 Popln.		Irrigated	Dry Land	Total	
1 Kabul	2410	250	100	350	2180	371	79	0	79	-291
1 Kapisa	433	10		10	423	76	40	0	41	-35
1 Konar	357	211		211	148	28	10	0	11	-16
1 Laghman	379	82		82	297	53	23	0	23	-30
1 Logar	317	216		216	101	18	16	0	16	-3
1 Nangarhar	1025	520		520	505	91	29	4	34	-57
1 Parwan	531	38	4	42	409	88	32	2	34	-54
1 Wardak	399	18	9	27	372	67	19	0	19	-48
2 Ghazni	771	52	18	70	701	126	151	3	154	28
2 Paktia	751	530		530	221	40	11	0	11	-29
2 Paktika	282	94		94	188	34	10	0	10	-24
3 Farah	378	12	237	249	129	23	35	0	35	12
3 Helmand	595	213	50	263	332	60	40	15	55	-5
3 Kandahar	804	292	37	329	475	86	65	1	66	-19
3 Nimroz	140	4	85	89	51	9	15	0	15	6
3 Uruzgan	502	10	31	41	461	83	60	10	96	13
3 Zabul	192	60	4	64	128	23	7	0	7	-16
4 Ghor	318	0	16	16	302	54	22	0	22	-30
4 Herat	370	1	487	488	382	99	57	5	62	-7
5 Badghis	318	0	167	167	151	27	17	7	24	-3
5 Faryab	674	7	1	8	666	120	19	53	72	-48
6 Balkh	629	41	3	44	585	105	99	45	144	39
6 Bamyan	317	0	15	15	302	54	27	5	32	-23
6 Jawzjan	678	59	11	70	608	109	26	111	137	28
6 Smangan	313	18	1	19	294	53	32	13	45	-8
7 Badakhan	554	0	0	0	554	100	55	77	132	32
7 Baghlan	498	221	2	223	275	50	45	25	70	20
7 Kunduz	662	294		294	368	66	84	1	85	19
7 Takhar	558	18		18	540	97	121	133	254	157
AFGHANISTAN	16655	3271	1279	4549	12106	2179	1268	520	1788	-391
		2983								

The demographic data utilized for this table are adapted from Thomas H. Eighthmy,
"The Population of Afghanistan, Inside and Out", A.I.D., 1989.

counted at all. Eighmy estimates a total of 3.3 million Afghan refugees in Pakistan, most of them from the border provinces. For example, Paktia accounts for 520,000 refugees, and Nangarhar for 530,000. Kunar and Logar each account for more than 200,000, and Wardak nearly 400,000. With the relative calm in the fighting since the Soviet army left Afghanistan, some of the refugees have begun to trickle back to their homelands, at least for temporary visits. Most recent estimates of refugees in camps by United Nations agencies show a slight drop in numbers, but the figures are not precise enough to reach definite conclusions.

The number of refugees in Iran is even less certain, partly because of the problem of classifying nomadic groups that traditionally moved back and forth between Afghanistan and Iran. The estimates in Table 4-1 of refugees in Iran is 1.3 million Afghans. The total refugee population living outside Afghanistan is therefore 4.5 million people. This estimate does not include the number of displaced population that have moved from the countryside to urban areas, or from one province to another.

Net population figures for each province are obtained by subtracting the total number of external refugees estimated for each province from its estimated population derived from the 1978 census. Total in-country population is therefore estimated at 12.1 million people, of which some 2 million live in Kabul province alone, reflecting a large immigration from rural areas during the war. We have no basis to know what adjustments have been made to these province-by-province population estimates in order to take into account internal immigration in Afghanistan since 1978. This overall total coincides with another independent estimate of 12.35 million (see "A General Review of Current Economic Situation in Afghanistan," by Abdul Aziz Ferogh, Nathan Associates Inc., April 1990).

Consumption Requirements

Estimates of grain consumption requirements are derived from the estimates of in-country population for each province. There are several alternative levels of average per capita cereal needs. Before the war, Afghanistan was roughly self-sufficient in grain production, even though some regions had surpluses and other regions had deficits. Depending on the weather, national grain consumption averaged between 220 and 260 kilograms per person per year.

United Nations relief organizations use 150 kilograms of wheat per person as the standard allotment for refugees in camps. The present analysis uses 180 kilograms of cereal grain consumption per person, the amount of total cereal (including wheat) recommended by FAO and other organizations as the minimum necessary for maintaining good health. On the basis of this estimate, the total grain requirements of all grain in Afghanistan are 2.2 million tons. A break-down by province can be seen in Table 4-1.

Wheat Production

In 1987, the Swedish Committee for Afghanistan carried out a nationwide agricultural sector survey. In every province a sample of farmers was interviewed extensively about farm activities and consumption. The sampling procedure was not statistically rigorous, so there are some questions about how representative the sample was of the general population. However, the Swedish Committee survey is the most reliable source of information on agricultural production available today, despite this shortcoming. Results from a similar 1989 survey are being processed and will be available later in 1990.

The Swedish Committee survey provides data on grain yields, grain areas per farm, proportion of area cultivated for each grain crop, and percentage of farmers planting the crop. These data can then be combined with rural population estimates to arrive at approximate grain production. The results appear in Table 4-1, separated for irrigated land and dry land production. In Afghanistan the bulk of wheat production takes place on irrigated land, thanks in part to the vast infrastructure of small scale irrigation fields using mountain streams as water sources.

Wheat production is estimated at 1.8 million tons in total, two-thirds of it, 1.3 million tons, coming from irrigated land and .5 million tons from rainfed land. National consumption therefore exceeds national production by about 400,000 tons.

The distribution of these grain deficits appears in the last column of Table 4-1. The largest deficit, nearly 300,000 tons, is concentrated in Kabul province. Border provinces towards Pakistan also have substantial deficits in grain production; however, their deficit status precedes the war. Earlier studies going back to 1972 report the border provinces as net importers of grain from other regions in Afghanistan (see Robert Manly's "Survey of Fertilizer Warehouse and Transport Requirements in Afghanistan," Checchi and Company, 1972).

Some provinces have apparent grain surpluses, most of them in the northern part of the country, bordering on the Oxus river basin. These provinces traditionally constituted the principal sources of grain for Kabul and even today might contribute a substantial portion of the capital's grain requirements, though at present the bulk of the city's supplies reportedly originates in the Soviet Union. Ferogh cites government figures of annual grain imports from the Soviet Union of 260,000 tons in recent years.

Three-fourths of Afghanistan's grain deficit, concentrated around Kabul, is satisfied mainly with imports from the Soviet Union; the remaining deficit,

spread out over the provinces bordering Pakistan, is supplied with either grain donations or private trader imports purchased commercially in Pakistan.

These foodgrain balance calculations are only indicative, because they are based on estimates that are themselves uncertain. Nevertheless, they do indicate a plausible range of wheat imports, and set out the broad estimates upon which projections must be based. Both the levels of average consumption requirements and the grain production estimates are subject to debate. If average per capita consumption were at the pre-war level of 220 kilograms, then national requirements would increase to 2.7 million tons and the shortfall would be 900,000 tons. Similarly, if national wheat production were, as some contend, 1.4 million tons instead of the 1.8 million tons calculated above, the shortfall would increase to 800,000 tons.

An important conclusion from this regional analysis is that the basic structure of the grain market in Afghanistan has remained constant over the past decades, despite the traumatic effect of the war in regional trade. The traditionally deficit areas are the border provinces toward Pakistan and they will remain in deficit for the foreseeable future, especially if the refugees begin to return to those provinces. Given the interregional transport problem in Afghanistan, these border provinces will continue to require imports to complement their foreseeable levels of production. Kabul remains, and will continue to be, the largest market for grain. Under more normal circumstances Kabul will resume grain imports from Pakistan to complement its national supplies from northern provinces.

Another general conclusion that can be derived from the provincial production estimates is that most of the population in Afghanistan is in a precarious food balance situation. Consumption levels are now very close to subsistence, and even small decreases in production could push certain regions into serious shortages. Such is already the case in provinces like Badghis and Faryab where locust and sunnpest have decimated wheat fields. The resulting grain shortage cannot be alleviated because of the excessively high transport costs even during peace time, and more so now during wartime. Localized acute shortages and grain price spikes are therefore bound to occur. It is difficult to differentiate between exceptional situations and portents of a general trend.

Chapter 5

TOTAL TRADE VOLUME

This chapter integrates the results of the previous chapters with new data on official trade to provide an estimate of the total flow of the target commodities between Afghanistan and Pakistan during 1989. The total estimate includes unofficial trade as measured by the cross-border survey, official private sector trade as reported by the Government of Pakistan, and public sector and NGO shipments as reported by the agencies involved.

Official Private Sector Trade

Officially sanctioned trade between Afghanistan and Pakistan declined drastically in the second half of 1989. Tables 5-1 and 5-2 reflect recent trends in officially recorded trade in the target commodities between Afghanistan and Pakistan, as reported in the Government of Pakistan publication, *"Foreign Trade Statistics of Pakistan."* Official exports of these products to Afghanistan during the fiscal year ended June 30, 1989, were only 47,062 thousand rupees, down from 464,310 thousand rupees in 1988. Official imports of the target products were down to 140,085 thousand rupees during fiscal 1989 from 210,088 thousand rupees the previous year. These declines continue the trends [reported] for both unofficial and official trade reported in the Phase I cross-border trade study. They also confirm the 10-to-1 ratio in Pakistani unofficial-to-official trade reported in that study. The war continues to take its toll on private sector trade.

However, some of the officially recorded decline may not reflect reality. The trade we termed unofficial trade in the cross-border trade studies includes all trade not officially sanctioned and recorded by the governments of Pakistan and Afghanistan, which in operational terms means trade not recorded by the Government of Pakistan.

**Table 5-1. Recorded Official Exports from Pakistan to
Afghanistan for Selected Products**
(thousands of rupees)

Product	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Kino	4,481	1,294	2,131	2,973	1,484	14,258	13,543	11,481	12,323	12,987	13,083	900
Bananas	8,333	18,773	16,195	18,876	19,085	14,512	12,667	12,855	19,302	34,096	29,062	2,081
Mangoes	137	99	122	224	251	172	567	329	59	601	3,489	896
Watermelons	119	30	76	95	109	311	825	1,611	2,813	3,136	4,558	879
Sanul supari									0	2,505	20,210	5,054
Sweetmeats	0	8							0	1,287	0	
Sugar confections			7	0	0	1,036	362	1,408	5,116	2,525	4,064	169
Chocolate preparations							3,212	4,881	6,977	32,611	61,189	10,931
Biscuits (cookies)									40	1,006	931	81
Lemonade					493	0	2,956	1,355	4,480	5,754	3,165	841
Rock salt	16,897	28,192	29,447	33,121	61,608	107,505	109,142	144,430	171,960	195,708	285,525	5,553
Cigarettes	585	853	682	298	169	230	349	116	111	279	1,316	1,338
Cotton, unprocessed							0	2,857	0	0	2,494	0
Finished leather					2,055	840	1,757	1,595	3,165	16,202	19,833	14,874
Raw leather					830	1,385	522	901	682	1,559	501	492
Wheat, rice, ghee, animals												
Other agricultural products	24,522	4,871	2,482	1,051	451	1,220	1,550	1,321	1,421	2,520	1,697	2,759
Total agricultural products	55,074	54,120	51,142	56,638	86,535	141,469	147,452	185,140	228,449	312,776	461,117	46,848
Threshing machinery			0	16	50	177	49	67	79	1,178	2,472	154
Tractors												
N.S. agricultural machinery/parts	254	55	13	68	16	97	362	491	121	1,218	721	60
Fertilizer												
Seed												
Total agricultural inputs	254	55	13	84	66	274	411	558	200	2,396	3,193	214
Total fuels												
Total selected exports	55,328	54,175	51,155	56,722	86,601	141,743	147,863	185,698	228,649	315,172	464,310	47,062

Note: Specifies all single items in the agricultural products, agricultural inputs, and fuel categories for which total exports exceeded Rs. 1 million each year. Each remaining item is summed together as residuals. Fiscal year end June 30.
Blank entries denote exports which are not recorded for a given year.

Source: Federal Bureau of Statistics, "Foreign trade Statistics of Pakistan".

Table 5-2. Recorded Official Imports to Pakistan from Afghanistan for Selected Products

(thousands of rupees)

Product	1986-87	1987-88	1988-89
Dry mash (bean)	11,915	13,910	8,870
Dried legumes	3,329	224	14
Apples	15,001	22,948	13,188
Grapes	104,211	89,202	58,034
Raisins	4,188	3,722	2,110
Almonds	619	2,724	861
Apricots	4,183	1,353	5,738
Pomegranate	6,016	12,035	4,232
Musk melon	20,161	15,907	21,652
Other fresh fruits/vegetables	999	1,708	333
Other dried fruit	1,868	2,258	626
Raw hides	41,274	23,624	6,661
Spices	4,731	5,369	6,680
Poppy seed	2,695	2,358	431
Mulhali	5,807	1,540	2,718
Other food products	944	737	2,971
Plant parts for perfumes	3,936	2,612	860
Other agricultural products	592	481	0
Total agricultural imports	232,079	202,732	133,959
Crop seed	1,075	7,356	6,126
Total fuels	N/R	N/R	N/R
Total selected imports	233,154	210,088	140,085

Note: Specifies all single items in the agricultural products, agricultural inputs, and fuels categories for which total exports or imports exceeded Rs. 1.0 million in either year. Remaining items summed as residuals. Fiscal years end June 30.

N/R = not recorded.

Source: Federal Bureau of Statistics, "Foreign Trade Statistics of Pakistan."

As shown in the Phase I report and confirmed in this report, much unofficial trade might otherwise be legal, but is carried out without recourse to customs procedures and therefore goes unrecorded. Especially for Afghan exports, much of the unofficial trade appears to be in legal commodities, which could have passed through customs posts had they been open or had it been convenient for the traders to open them. On the other hand, some of this prospectively legal trade could be illegal under Afghan law, especially the export of lumber.

To compare the official Pakistan trade statistics with estimates of the volume of unofficial trade, it was necessary to convert either official rupee values to weight equivalents or the weight used for unofficial trade to rupees. Because this study is concerned with physical trade capacity, it is preferable to express estimates in weight-volume terms. During the Phase I study we developed a set of weight equivalents for the commodities reported in the Government of Pakistan publications. These equivalents were used again to calculate volume estimates for official exports from Pakistan, as shown in Table 5-3. Official trade in the target commodities, as shown in the table, appears to be less than 1 percent of unofficial trade in them—no surprise because Pakistani law forbids the export of many of the items involved.

Total Shipments

Table 5-3 also includes estimates of all other types of cross-border shipments developed in previous chapters. The comparisons by product are more relevant than the totals. The unofficial private sector and A.I.D. are shown to be the major providers of food to Afghanistan, with A.I.D. providing slightly more wheat (keeping in mind the high margin of error for unofficial estimates) and the private sector providing more diverse food items. The UN and the NGOs provided the bulk of the agricultural inputs during 1989, but that trend will probably change during 1990 and 1991 with the new Agricultural Sector Support Project supported by O/AID/Rep.

Shipments of target commodities to Afghanistan from Pakistan totaled more than 0.5 million metric tons during 1989, about 80 percent of which was supplied by the informal private sector.

**Table 5-3. Total Shipments of Target Commodities
From Pakistan to Afghanistan**

(metric tons)

Product	Source					Total
	Unofficial Trade	Official Trade	A.I.D.	UN	PVOs	
Wheat	66,402		75,000	8,806		150,208
Wheat Flour	14,840					14,840
Rice, Long Grain	68,995					68,995
Rice, Short Grain	27,189					27,189
Fruit, Fresh	52,814	289				53,103
Fruit, Dried	379					
Pulses	2,291		3,667	149		6,107
Vegetables	11,154					
Ghee	20,215		10,431	100		30,746
Sugar, White	17,757		1,142	48		18,947
Sugar, Brown	11,731					11,731
Confections	18,420	106				
Tea	1,143					
Salt	1,177	1,029	242			2,448
Food Animals	561					561
Other Food		1,200	365	80		1,675
Other Ag. Products		27				
Seed				3,153	926	4,081
DAP Fertilizer	14,233			5,683	3,376	23,292
Urea Fertilizer	29,691					29,691
Tractors					240	240
Threshers		20			10	30
Other Ag. Eqpt.		10				10
Traction Animals					18,000	18,000
Other Ag. Inputs						0
Cotton Products	718					
Wool Products						0
Leather Products		100				100
Fuels	50,172					50,172
Construction Materials	214				32,000	32,214
Total	410,095	2,781	90,867	18,029	54,554	644,379

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Chapter 6

PRICES AND MARKET ANALYSIS

Because of the small size of our sample relative to the total border market area, and because of the general volatility of prices in Afghanistan, our measured price series vary considerably among themselves. For this reason, we recommend that they not be accepted at face value—for example, as indicators of scarcity—until confirmed by further surveys.

Wheat and Wheat Flour Prices

Wheat and wheat flour prices varied greatly among the provinces visited. The differences tend to reflect market conditions in those provinces. Wheat prices in the border areas with Pakistan reflect a functioning market, despite wartime conditions that still prevail in varying degrees.

Current (December 1989) Prices

Data from the Cross-Border survey reveal different prices for wheat and flour in the various provinces visited by the surveying teams. In general, and not surprisingly, prices are higher in Kabul city and surrounding provinces, and lower in towns with easier access to Pakistan. It was not possible to obtain price data from the city of Kabul. The closest market visited by one of the survey teams was Shekhobad, in Wardak province. Shekhobad has become a major trading center in the last year, following the burning of the Durani market to curtail Kabul's access to essential supplies. In December 1989, the price of wheat in Wardak was reported to be 736 rupees per 100 kilograms, or 7.36 rupees per kilo. One seer of 7 kilos costs 51.5 rupees. At the average exchange rate prevailing in December 1989 of 19 afghanis per rupee, the price in Wardak was 979 afghanis per seer. (Normally the prices reported are in afghanis per seer, which is the traditional measurement unit for grains. A seer is equivalent to 7 kilograms. For comparison purposes most of the following analysis is expressed in terms of Pakistani rupees.) Wheat prices in Kabul would most likely be higher than in Wardak.

Table 6-1 presents December 1989 wholesale prices for 100 kilograms of wheat and wheat flour. These data are extracted from a more complete set of price information found in Table 2-7.

Kunar, the most accessible of the border provinces to Peshawar, has the lowest price for wheat flour: 345 rupees per 100 kilograms. Wardak, the farthest province from Pakistan, has the highest price: 812 rupees per 100 kilograms.

Paktika represents an anomaly within the general pattern of prices and proximity: it has some of the highest prices reported for both wheat and wheat flour despite being on the border with Pakistan. The wholesale price for wheat flour is reportedly 709 rupees per 100 kilograms in Paktika, Table 6-1, whereas in neighboring Paktia the corresponding price is only 509 rupees. The apparent reasons for these high prices in Paktika are the extreme ruggedness of the terrain, lack of good access routes, and remoteness from major towns in both Pakistan and Afghanistan. There is a long haul within Pakistan before it reaches the Pakistan-Afghan border.

Another anomaly in Paktika is that the reported price for wheat is higher than for wheat flour, which is economically improbable. Field data sometimes have inconsistencies like this. One possible explanation is that imported wheat flour of poor quality could be cheaper than the preferred, locally grown wheat. Moreover, the few observations recorded for wheat might not be truly representative of general market conditions.

In the most accessible provinces—Kunar, Logar, and Paktia—the main trade is in wheat flour, not in wheat grain. In contrast, grain trade is more prevalent in the more remote provinces of Helmand and Kandahar. In Paktika and Wardak, two of the least accessible areas, trade in both wheat grain and flour were reported.

The wheat price in Helmand, reported at 500 rupees per 100 kilograms in December 1989, is lower than would be expected given its distance from the Pakistan border. Three factors likely account for this situation: first, the Helmand valley has traditionally been a grain surplus area, in part because of the irrigation infrastructure built in earlier years; second, the road linking Helmand with Kandahar and Quetta is in reasonably good condition; and third, there is a relative calm in fighting in that area. Helmand may continue to provide a surplus of grain to Kandahar and other border provinces.

Prices reported on the cross-border survey for wheat in Pakistan show substantial variation, even though the Pakistan government maintains fairly uniform prices throughout the country. The reported December 1989 price for flour in Pakistan ranged from a low of 278 rupees per 100 kilograms to a high of 400 rupees. The official wholesale selling price of

Table 6-1

**Wheat and Wheat Flour Wholesale Prices in Survey Provinces
in Afghanistan, December 1989.
(rupees per 100 kilograms)**

Province	Wheat	Wheat Flour
Helmand	500	
Kandahar	500	
Kunar		345
Logar		556
Paktia		503
Paktika	746	709
Wardak	736	812
Pakistan	230-376	278-400

Source: Table 2-7 in Chapter 2.

wheat is adjusted regularly by the Government of Pakistan. In December 1989 it was around 250 rupees per 100 kilograms. Part of the range in prices in Pakistan reflects regional differences between Peshawar and the smaller towns in the tribal areas along the border with Afghanistan. Quality and brand-name differences also contribute to the considerable range of price for wheat and wheat flour. Finally, although mills in Pakistan might sell flour at nearly the same price FOB factory, Afghan importers likely purchase their flour in towns or markets nearer the border, or at the border itself, at higher prices.

June 1989 Prices

Survey measurements show that prices for wheat and wheat flour in Afghan border markets, expressed in Pakistani rupees, appear to have declined between June and December 1989, as shown in Table 6-2. There are two possible explanations for this apparent decline, which we do not believe reflects actual price movements or scarcity inside Afghanistan.

The most probable explanation for the trend in measured wheat prices is that the exchange rate used to convert afghanis to rupees shows a declining confidence in the Afghan currency and economy instead of solely reflecting relative prices in the two economies. We are confident that our source for the exchange rate series used in this report (the Zarab Zarafa Association of Peshawar) is complete and reliable; the exchange rate between the afghani and the rupee progressed as reported. During the period under study, however, political and military events in Afghanistan are likely to have lessened confidence in managing the Afghan economy. In addition, both the Afghan Central Government budget and the country's current account were reportedly in deficit (although official data to confirm the report are not available); together, they would explain an increase in the afghani-to-rupee exchange rate quite apart from any real changes in relative prices. If the afghani fell relative to the rupee more than was warranted by the actual relative purchasing power of either currency, then rupee quotes of Afghan prices may appear to decline over time, even though in real terms they are rising.

A second possible explanation for the apparent decline in wheat prices is recall error. Our survey took place in February 1990 and often involved small-scale traders (although, as mentioned in Chapter 2, our target interviewees were large-scale traders). Consequently, lapsed memory and faulty record keeping may have affected the measurement of June wheat prices.

Barring either of these explanations, wheat prices could actually have declined or been relatively stable between June and December 1989. Because

Table 6-2**Wheat and Wheat Flour Wholesale Prices in Survey Provinces
in Afghanistan June 1989.
(rupees per 100 kilograms)**

Province	Wheat	Wheat Flour
Helmand	560	
Kandahar	560	
Kunar		300
Logar		635
Paktia		435
Paktika	929	840
Wardak	1,057	1,158

Pakistan	224-376	270-393
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Source: Table 2-7 in Chapter 2.

the harvest begins in July, June is traditionally a month of shortage of locally grown wheat in Paktika and Wardak. Prices would normally be relatively higher in June, even with significant wheat imports. There is no separate indication, however, that wheat was any more plentiful in the border areas during December than during June.

The measurements of wheat prices reported during the Cross-Border Trade Survey differ somewhat from those reported by other surveys, which are inconsistent. The differences do not explain the statistical artifact of the June to December rupee price decline, however. The C-B Trade measurements of December prices were generally about 20 percent higher than those reported by Development Alternatives Inc. (DAI) from their December survey⁶. The only available series dating to June 1989 is the VITA survey, the July reports of which are consistent with the June reports of our survey. In sum, no explanation of the price decline anomaly is apparent from comparing our results with those of other surveys.

We conclude that the apparent decline in wheat prices in Afghan border markets is an anomaly introduced by exchange rate fluctuations and may not reflect the actual scarcity or availability of wheat inside Afghanistan. Any study of wheat scarcity should be based on more extensive surveys and studies than those carried out here.

Prices and Transport Costs

Transport costs represent a significant factor in determining wheat and wheat flour prices in different provinces. Transport costs increase substantially with distance from borders. In the most remote provinces, transport costs may exceed the original cost of the wheat in Pakistan.

In view of the great variability of prices among regions, the apparent relationship between prices and proximity to the Pakistan border warrants further exploration. Table 6-3 presents the December 1989 prices for wheat flour as reported by the survey teams, together with the reported transport costs from the border to the Afghan markets. The accompanying Figure 6-1 shows the relationship between these columns. There is a general correspondence of prices with the transport costs obtained in this survey: lower prices correspond to lower transport costs and higher prices correspond to higher trucking rates.

Paktia is the exception. Its wheat flour price (503 rupees per 100 kilograms) is high relative to the low transport rates from the border quoted

⁶See "Report on Findings of Bazaar Survey I", Development Alternatives, Inc., for O/AID/Rep, April 1990. This report was made available to Nathan/Berger during the final draft stage of the present report.

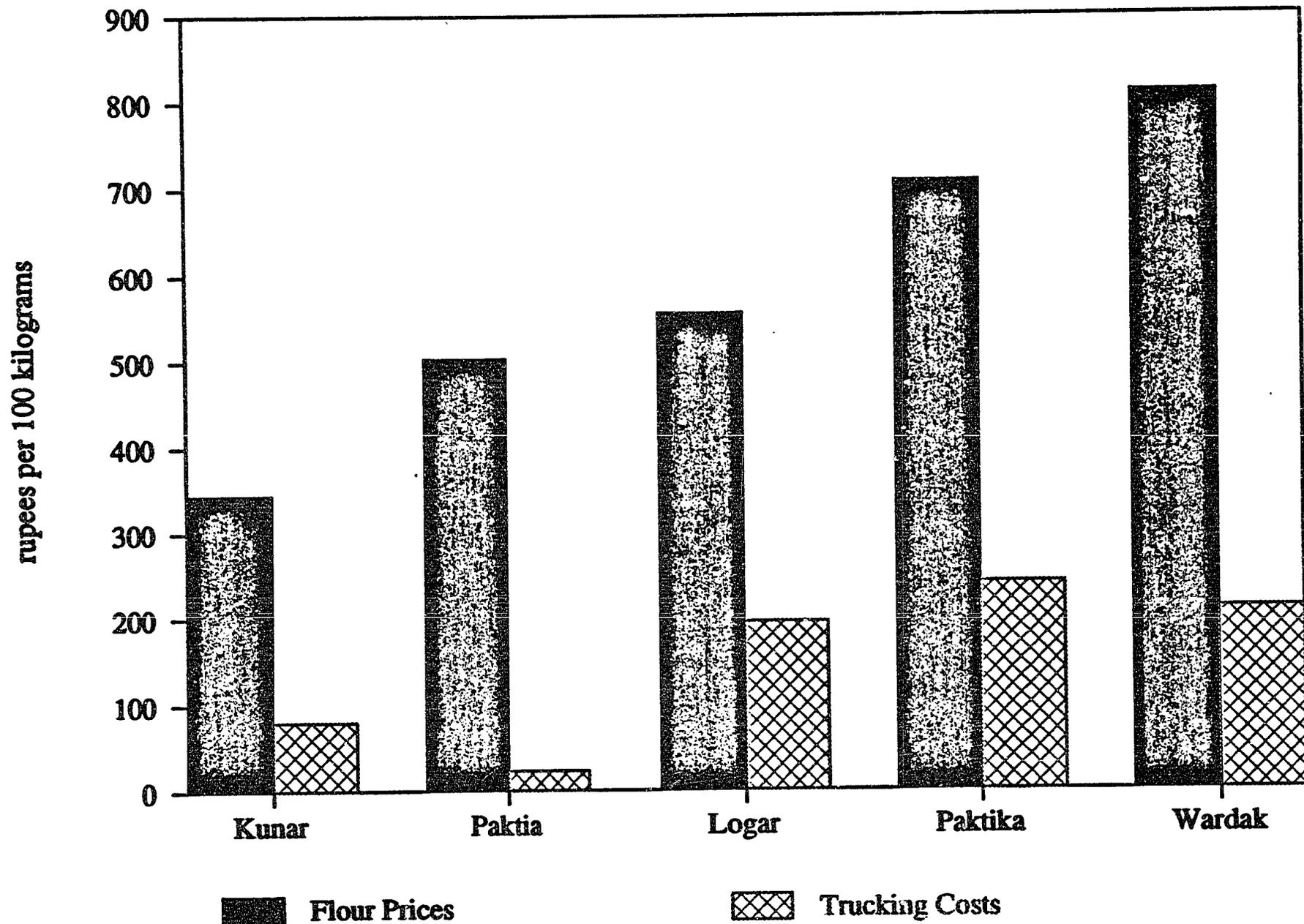
Table 6-3

**Wheat Flour Wholesale Prices and Truck Transport Costs
in Survey Provinces in Afghanistan. December 1989.
(rupees per 100 kilograms)**

Province	Wheat Flour Price	Trucking Costs from border
Helmand		
Kandahar		
Kunar	345	89
Paktia	503	23
Logar	556	195
Paktika	709	241
Wardak	812	211
Average	585	150

Source: Tables 2-7 and 2-9 in Chapter 2.

**Figure 6-1. WHEAT FLOUR PRICES AND TRANSPORT COSTS
(100-Average)**



by importers (only 23 rupees per 100 kilograms). The reason for Paktia's reported low transport costs within Afghanistan may be its relative accessibility from the border across both Parachinar and Miran Shah; that is, most of the transport cost from Peshawar is on the Pakistani side. Data on Paktika, on the other hand, confirms the conclusion that the reported high price of flour results from high transport costs. In fact, the reported transport costs for Paktika are higher than for Wardak (241 rupees per 100 kilograms and 211 rupees per 100 kilograms, respectively).

It is not possible to estimate quantitatively the general relationship between transport cost and the price of wheat flour in the different provinces because observations for only five provinces are available. However, the visual relationship is strong indication of a definite trend. A trend line appears to match the variation in prices across provinces. Basically it shows that wheat flour prices increase in proportion to transport costs from the border, with transport costs accounting for perhaps two-thirds of the price increase between the Pakistan border and the provinces in Afghanistan.

The close relationship between wheat flour prices and trucking costs is reassuring in several respects. It confirms that, despite the prolonged war in the border areas, a grain market still functions, and it functions reasonably well in the case of foodgrains. There is some irony that in Afghanistan, under a non-market regime, grain prices roughly reflect market conditions, while in Pakistan, grain prices are highly regulated and are allowed only partially to adjust to reflect external and internal conditions.

It is also reassuring that the cereals market in Afghanistan has proved sufficiently resilient to respond to the impact of several external interventions: the inflow of substantial volumes of donated grain; the blocking of the main supply route from Peshawar to Kabul; the interference with trade by both the Kabul government and Mujahidiin forces; the lack of mountain roads and their terrible condition; the shortage of vehicles and fuels; the lack of an official currency exchange mechanism; the regulations proscribing cross-border trade on both sides; and the official and unofficial tolls, taxes, and fees extracted en route in both countries.

Relationship to World Market

Wheat prices in Afghanistan are roughly equal to or below the import price equivalent of wheat bought in the world market. The border has been closed to international trade in the past 2 years. However, the following calculations illustrate the relationship.

In June 1989 wheat prices in Kansas City were about \$4.33 per bushel of No. 2 hard, or \$173 per metric ton if a bushel is taken as equivalent to 25 kilograms. Ocean freight to Karachi is roughly estimated at \$50 per metric

ton, and inland freight and handling costs at least \$50 per metric ton. Other costs such as barge transport in the United States, financial costs, documentation, and right of passage bring the total price above \$300 per metric ton. At an exchange rate of 20 rupees per U.S. dollar, 100 kilograms of imported wheat would cost 600 rupees at the entry point in Afghanistan. The price for wheat flour would be higher than for grain, to cover processing and packaging.

Transport costs inside Afghanistan would tend to increase the price of wheat and wheat flour in the provincial markets in proportion to their distance from the points of entry. Prices reported by the survey team for June 1989 in the different provinces were close to or below the hypothetical cost of the imported wheat. In Kandahar, for example, the reported price of wheat in June was 560 rupees per 100 kilograms, and in December 1989 it was 500 rupees per 100 kilograms. Wheat prices in Kabul are unknown but are believed to exceed 1,000 rupees per 100 kilograms.

The basic conclusion from this comparison is that prices inside Afghanistan are roughly in harmony with international wheat prices. If Afghanistan were to open its wheat market to international competition, little disruption in prices would probably occur. On the other hand, current prices inside Afghanistan do reflect the presence on its Pakistan border of a substantial supply of wheat at subsidized prices.

Pakistan Wheat Prices

A more relevant comparison is between the reported Afghan prices and prices in Pakistan. Official regulated wholesale wheat grain prices in Pakistan range between 250 and 270 rupees per 100 kilograms. There is an active private grain trade in Pakistan, but it is strongly influenced by the buying and selling prices of the national government. Prices in the private market differ only slightly from the official prices.

The subsidized Pakistan wheat price is substantially below the international import equivalent. The cost of imported wheat would range between \$250 and \$300 per metric ton, or 500 to 600 rupees per 100 kilograms. In other words, official wheat prices in Pakistan are about half of the international import equivalent. Pakistani farmers are receiving half as much for their wheat as they probably would in a more open market. Pakistani consumers are the main beneficiaries, and farmers are basically subsidizing consumers.

Afghans living in provinces bordering on Pakistan also benefit from the subsidized Pakistan wheat price. The artificially low price in Pakistan creates a strong incentive to move wheat out of Pakistan into Afghanistan and other markets that are more in line with international prices. The Pakistani government prohibits the exporting of grain because permitting exports would

make it impossible to maintain the low official prices, and wheat exports to Afghanistan are therefore illegal. However, the central government of Pakistan has limited control of trade in the tribal areas along the Afghan border. Wheat and wheat flour are smuggled with little interference from the authorities.

Mountains rather than legal proscriptions keep wheat and wheat flour smuggling from becoming more extensive. Transport costs over the mountain territories inside Afghanistan increase rapidly. The dampening effect of transport costs on the flow of wheat grain and flour into Afghanistan is a source of concern among donors providing grain for distribution in Afghanistan. They fear that, unless precautions are taken, the recipients of the grain might prefer to sell it directly in Pakistan instead of incurring the costs of taking it inside Afghanistan. Monitors are therefore placed in the trucks carrying the grain to accompany the cargo until it is delivered to its ultimate destination.

Cooking Oil Prices

After wheat flour, the second most important item flowing into Afghanistan from Pakistan is cooking oil or ghee. There are several brand names, quality differences, and unit sizes involved, but all fall within the cooking oil category.

The survey teams reported the cooking oil prices in the provinces visited (see Table 6-4; for more detailed data see Table 2-7). The most important information noted in this table is the stability of cooking oil prices in Pakistan and across provinces in Afghanistan. As reported in the survey, the December 1989 range of prices for cooking oil in Pakistan, is small: from 1,794 to 1,947 rupees per 100 kilograms. The prices in the Afghan provinces were also relatively stable because the high price of oil obscures the differences between provinces attributable to transport costs. The lowest price—1,980 rupees per 100 kilogram—was registered in Kunar, as it was for wheat, whereas the highest—2,664 rupees per 100 kilogram—was recorded in Paktika. Wardak and Helmand, the two provinces farthest from the border, also had the highest prices for cooking oil. In Nangarhar there was an unexpectedly high price of 2,579 rupees per 100 kilograms. The reason for such a high price in a province so close to the border is unclear; but only two observations were recorded so the reported price might not be representative of the province as a whole.

Cooking oil prices were generally higher in June 1989 than in December 1989 in the seven surveyed provinces. In Wardak, Paktika, and Nangarhar, prices were above 3,000 rupees per 100 kilograms. In two provinces—Kunar and Helmand—prices were below 2,000 rupees per 100 kilograms. The variation in prices among the provinces was therefore wider in June than

Table 6-4

**Cooking Oil Wholesale Prices in Survey Provinces
in Afghanistan. June, December 1989.
(rupees per 100 kilograms)**

Province	December 1989	June 1989
Helmand	2,599	1,713
Kandahar		
Kunar	1,980	1,910
Paktia	2,461	2,658
Logar	2,281	2,444
Paktika	2,664	3,028
Wardak	2,558	3,271
Nangarhar	2,579	3,133
Pakistan	1,794-1947	1,517-1,189

Source: Table 2-7 in Chapter 2.

December, a situation similar to that for wheat and wheat flour. Transport costs from the border also varied widely: from 21 rupees per 100 kilograms to Nangarhar, to 241 rupees per 100 kilograms to Paktika, and 173 rupees per 100 kilograms to Wardak.

The reasons for the apparent decline in prices from June 1989 to December 1989 are the same as for wheat and wheat flour. (See the previous section of this chapter, "June 1989 Prices.")

Fat and Thin Rice

Two major types of rice are exported from Pakistan to Afghanistan: fat and thin. Thin rice is considered much higher quality and commands nearly twice the price of fat rice. Unfortunately, during the implementation of the cross-border survey the distinction between the two qualities was not consistently noted; in only a few questionnaires was thin rice specifically identified, but many of the responses for "rice" probably meant thin rice.

Table 6-5 extracts the reported rice prices for the border provinces in the survey. For Paktia province, only the thin rice price is reported. The complete set of data can be found in Table 2-7. As with other commodities, the lowest prices were registered in Kunar, Logar, and Paktia; and the highest ones were in Wardak and Helmand. The difference between these two groups is about 700 rupees per 100 kilograms, reflecting the effects of transport and other marketing costs incurred by traders. In Pakistan fat rice sells for about 450 to 500 rupees per 100 kilograms; thin rice sells for 900 to 1,000 rupees per 100 kilograms. Most of the rice exported to Afghanistan is thin rice, to judge by the prices.

The rice trade from Pakistan to Afghanistan is entirely commercial. There are no shipments of rice by donor organizations, as far as the survey team was able to determine. The higher value of rice makes it possible to absorb the transport and other costs involved in the trade. However, overall rice consumption in Afghanistan is only about one-tenth of wheat consumption; it should therefore be considered more a specialty grain than a staple.

The decline in rice prices between June 1989 and December 1989 is not as marked as for wheat and wheat flour, but it is significant nonetheless. In two provinces a minor increase occurred, but in Helmand, Paktika, and Wardak a substantial price drop occurred, down to 30 percent in Wardak.

Sugar and Brown Sugar (Gor)

White sugar and a form of brown sugar (gor) are exported to Afghanistan by commercial traders. Brown sugar is cheaper and is preferred

Table 6-5

Wholesale Prices for Rice in Survey Provinces
in Afghanistan. June, December 1989.
(rupees per 100 kilograms)

Province	Rice Price (rupees/100 kilograms)	
	December 1989	June 1989
Helmand	1,809	2,096
Kandahar		
Kunar	1,100	1,035
Paktia	1,211	1,133
Logar	1,165	1,333
Paktika	1,711	2,120
Wardak	1,802	2,616
Nangarhar		
Pakistan	720-1,300	700-1,250

Source: Table 2-7 in Chapter 2.

in the preparation of foods. Table 6-6 presents the average prices for both white sugar and brown sugar in the surveyed provinces in June 1989 and December 1989.

Predictably, December 1989 prices were consistently lower than June 1989 prices. The drop in price ranged from 11 to 21 percent for white sugar and between 15 and 34 percent for brown sugar. However, the geographic breakdown of prices in December 1989 did not follow the usual pattern. The price of white sugar was highest in Kunar and lowest in Wardak. This finding raises questions about the accuracy of the data, but might also be explained by possible confusion among respondents between white and brown sugar.

Fertilizer

Two distinct types of fertilizers are traded between Pakistan and Afghanistan: urea and DAP (Double-Diammonium-phosphate). Though the flow of exports is normally from Pakistan to Afghanistan, there have also been reports of reverse flows of urea, because Afghanistan can produce urea in Mazar-i-Sharif. The Government of Afghanistan distributes urea at subsidized prices, but breakdowns in the distribution system make supplies to border provinces near Pakistan unpredictable. Occasionally, the price of urea in Afghan markets becomes sufficiently low to make it worthwhile to export it to Pakistan.

It is not clear to what extent exports of urea into Afghanistan are a commercial activity of private traders, or the shipments of donor agencies (official and PVOs). Both the United Nations and NGOs have been active in delivering fertilizers to Afghanistan. In 1989 the two groups shipped a total of 7,400 tons. Table 6-7 gives prices of both fertilizers in the surveyed provinces.

The prices for fertilizers are surprisingly low: both urea and DAP cost less than wheat in most of the provinces surveyed. This has two implications for potential future efforts to support a rapid recovery of Afghan agriculture. First, the economics of supplying fertilizer to traditional deficit areas should always be examined as an alternative to subsequent movements of wheat to the area. Where responses to fertilizer are high, this production technology may prove superior even when the full costs of fertilizer production and transport are taken into account. Second, given the low prices, it is unlikely that private traders will find it advantageous to take part in the trade. The efforts of donor agencies will be needed to ensure that fertilizers are delivered on a timely basis. The current low prices of fertilizers in Afghanistan may result from the successful efforts of NGOs and the United Nations in the past, as well as subsidies on fertilizer distribution by the Afghan government.

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Table 6-6

**Wholesale Prices for Sugar and Brown Sugar
in Survey Provinces in Afghanistan.
June, December 1989.
(rupees per 100 kilograms)**

Province	Sugar		Brown Sugar	
	December	June	December	June
Helmand	1,751	2,040	947	1,111
Kandahar				
Kunar	1,800	1,800		
Paktia	1,474	1,467	977	1,429
Logar	1,632	1,833		
Paktika	1,584	1,967	1,051	1,593
Wardak	1,474	1,867	1,737	2,400
Nangarhar				
Pakistan	1040-1213	970-1170	600-786	633-1143

Source: Table 2-7 in Chapter 2.

Table 6-7

**Wholesale Prices for Urea and DAP Fertilizers
in Survey Provinces in Afghanistan.
June, December 1989.
(rupees per 100 kilograms)**

Province	Urea		DAP	
	December	June	December	June
Helmand	538	586	829	968
Kandahar				
Kunar	420	380	560	520
Paktia				
Logar				
Paktika	621	787	468	547
Wardak		333		
Nangarhar	509	573		
Pakistan	249-305	160-270	430-499	390-480

Source: Table 2-7 in Chapter 2.

It is again noted that prices in December 1989 were lower than the preceding June in most provinces. This consistency across commodities may indicate a general improvement in the supply and distribution system for most agricultural commodities in the provinces bordering Pakistan.

The geographic distribution of prices for fertilizers in the different provinces does not strictly follow the pattern of other commodities, and the price differentials do not reflect transport costs from the border. Donor agencies and the government probably determine delivery volumes with little regard to transport costs.

Other Commodities

Price analysis of other commodities in the cross-border trade is made difficult by the small number of observations obtained in the survey and the great diversity of products involved. This is not to imply that trade in those goods is unimportant. In the case of fruits, for example, a considerable volume of high-value trade in both directions was taking place in December 1989, with Pakistan exporting citrus (oranges and tangerines) to and importing apples from Afghanistan. However, the aggregation of several types of fruits makes price comparisons across provinces and over time meaningless.

Another important set of items exported to Afghanistan, but not included as a priority group of commodities in this study, is fuels. This category comprises gasoline, diesel, kerosene, and motor oil. Despite the aggregation of such diverse products, it is illustrative to examine the average prices recorded during this survey, in Table 6-8.

Kunar and Paktia, as before, have the lowest fuel prices; Paktika and Helmand have the highest. Nangarhar again shows exceptionally high prices, despite proximity to the border, for reasons not now clear. A general price drop in the second half of 1989 is again apparent in the fuel price data. In nearly all provinces, prices in December were lower than in the preceding June. A large portion of these fuels are imported from Pakistan. It appears then that the devaluation of the afghani with respect to the Pakistani rupee in the second half of 1989 was greater than justified in terms of losses in the purchasing power of the afghani.

Other Sources of Price Information

Volunteers in Technical Assistance (VITA), a private voluntary organization with substantial activities in Afghanistan in agriculture, irrigation, and road reconstruction, has monitored prices inside Afghanistan over the past year. They have concentrated on a few items including wheat, meat, and fertilizers.

Table 6-8

**Wholesale Prices for Fuels in Survey Provinces
in Afghanistan. June, December 1989.
(rupees per 100 liters)**

Province	Fuel Prices	
	December	June
Helmand	1,138	1,385
Kandahar		
Kunar	677	677
Paktia	605	567
Logar	730	730
Paktika	734	882
Wardak	697	833
Nangarhar	684	862
Pakistan	400-637	400-573

Source: Table 2-7 in Chapter 2.

Table 6-9. Price of Agricultural Commodities in Afghanistan (Afghanis)

January 1990

Regions	Provinces	Wheat Per Seer (7 KG)	Regional Average (Wheat)	Oxen per Head	Meat (1 KG)		Fertilizer (1 Bag - 50 KG)		Regional Average (Fert. Phos.)	Regional Average (Fert. Urea)
					Mutton	Beef	Phosphate	Urea		
1	Kabul	1200	812.50	170,000	900	700	1900	1500	1850.00	1625.00
	Logar	700		140,000	700	600	2200	2000		
	Parwan	700		130,000	700	550	1800	1500		
	Kapisa	650		130,000	700	600	1700	1600		
2	Ghazni	700	675.00	135,000	700	600	2000	1700	2050.00	1700.00
	Paktika	650		130,000	700	600	2100	1700		
3	Ghore	--	725.00	--	--	--	--	--	2350.00	2150.00
	Bamiyan	800		130,000	650	550	2600	2400		
	Wardak	650		140,000	700	600	2100	1900		
4	Paktia	750	750.00	125,000	800	650	2000	1700	2000.00	1400.00
5	Zabul	650	675.00	120,000	700	550	2300	2000	2425.00	2075.00
	Kandahar	700		130,000	750	600	2300	2100		
	Uruzgan	700		130,000	700	600	2600	2200		
	Helmand	650		125,000	700	600	2500	2000		
6	Farah	700	700.00	125,000	700	600	2500	2200	2600.00	2166.67
	Herat	--		--	--	--	--	--		
	Pedghis	750		125,000	700	600	2600	2200		
	Nimroz	650		130,000	700	600	2700	2100		
7	Faryab	850	750.00	130,000	700	600	2300	1900	2000.00	1700.00
	Jawzjan	650		120,000	650	550	1700	1500		
	Balkh	--		--	--	--	--	--		
8	Kunduz	650	666.66	125,000	700	600	1800	1300	2500.00	1900.00
	Baghlan	650		130,000	700	600	1700	1500		
	Samangan	700		135,000	700	600	1500	1000		
9	Badakhshan	800	725.00	130,000	750	650	2000	1700	1800.00	1500.00
	Takhar	650		125,000	650	550	1600	1300		
10	Kunar	550	733.33	120,000	650	550	2000	1700	2333.33	2333.33
	Mangarhar	950		140,000	900	800	3000	2700		
	Laghman	700		135,000	750	650	2900	2600		
NATIONAL AVERAGE			721.24						2220.83	1855.00

Source: VITA, Peshawar, January 1990.

Table 6-9 presents the most recently available report from VITA on prices inside Afghanistan. The last available price newsletter was issued on January 30, 1990, and summarizes data collected in the first half of the month from informants recently returning from Afghanistan. Informants included new or returning refugees, truck drivers, Mujahidiin soldiers, traders, and ordinary travelers from Afghanistan. They were interviewed mainly in Peshawar but also at refugee camps.

Kunar has the lowest price for grain in the VITA report, at 550 afghanis per seer (7 kilograms), equivalent to 374 rupees per 100 kilograms, converted at a January 1990 exchange rate of 21 afghanis per rupee. The highest price listed is for Kabul, at 1,200 afghanis per seer (816 rupees per 100 kilograms). For most of the provinces, wheat prices ranged between 650 and 950 afghanis per seer (442 and 642 rupees per 100 kilograms).

The geographic pattern of fertilizer prices differs from that found in food products. For DAP the lowest price was found in Kabul, at 1,850 afghanis per 50 kilograms whereas the highest was in Kunar, at 2,633 afghanis per bag, equivalent to 176 and 250 rupees per 100 kilograms, respectively. A similar relationship was found for urea: the price in Kabul was only 155 rupees per 100 kilograms, whereas in Kunar it was 222 rupees per 100 kilograms. Fertilizer prices are therefore cheapest in cities and towns with access to supplies from the government, and they increase in provinces farther from these cities. This is the reverse of what occurs with grain prices.

In provinces where the Mujahidiin has nearly full control, such as Kunar, the government is not able to supply cheap fertilizers. Prices are higher there. (This also explains why in Wardak, the province nearest the Kabul market, fertilizer prices were found to be lowest in our survey). The provinces under the control of the Mujahidiin must be supplied from outside, even though it would be cheaper to supply those areas from government stocks.

Development Alternatives Inc. (DAI). In the past year DAI began implementation of a USAID-funded agricultural sector support project for Afghanistan. One of its initial efforts was to conduct a survey of bazaars in neighboring provinces inside Afghanistan. Table 6-10 gives preliminary average prices recorded during this informal survey of bazaars in the latter part of 1989.

In DAI's survey, the highest wheat prices were recorded in Wardak (495 rupees per 100 kilograms), followed by Ghazni and Logar. The lowest price was in Helmand, at 297 rupees per 100 kilograms. Kandahar had an intermediate price of 356 rupees per 100 kilograms. Given a fixed Pakistani price of 225 rupees per 100 kilograms of wheat, and adding the transport costs quoted from several trucking companies, DAI estimated the break-even price at which wheat could be sold in those bazaars. The lowest break-

Table 6-10

**Truck Transport Costs and Wheat Prices
in Pakistan and Afghanistan. January 1990.
(rupees per 100 kilograms)**

Province	Pakistan Price	Transport	Total	Afghan Price
Wardak	225	350	575	495
Ghazni	225	300	525	428
Logar	225	400	625	428
Kandahar	225	120	345	356
Helmand	225	170	395	297

Source: Development Alternatives, Inc. Peshawar 1990.

even price was for Kandahar, at 345 rupees for 100 kilograms, and the highest was for Logar at 625 rupees per 100 kilograms. Comparing the break-even price with the existing prices in the Afghan bazaars shows that only in the case of Kandahar would it pay a commercial trader to purchase wheat in Pakistan to sell in Afghanistan. In the other provinces, the Afghan bazaar prices are below the break-even prices. Such a situation does not bode well for privatizing the distribution of donated wheat by selling it to traders in Pakistan. Even if the wheat was sold at a high discount to make it profitable to take into Afghanistan, it could be just as profitable for the buyers to resell it in Pakistan, and save themselves the transport costs and risks of taking it into Afghanistan.

Agency Coordinating Body for Afghan Relief (ACBAR). The transport costs used by DAI in the preceding calculations are consistent with the transport quotations obtained by ACBAR in Peshawar. Table 6-11 reproduces the results of their inquiries, published in the *Afghanistan Transportation and Trucking Directory*. This publication contains information on the 16 trucking companies (several are cooperative unions of individual truck owners) able to transport large volumes of cargo across the border for delivery inside Afghanistan. The highest transport cost is demanded for deliveries to Wardak and Ghazni (about 350 rupees per 100 kilograms), and the lowest quotations were for Kunar and Paktia (188 and 167 rupees per 100 kilograms, respectively). These transport costs are for shipments from Peshawar to the Afghan provinces. The quotations given are therefore higher than the costs reported by respondents in the cross-border survey, which focused only on transport cost from the border.

Table 6-11. Average Shipment Price Table

January-August 1989

Province	Price Range Rs/mt	No. of Price Quotes	Average Rs/mt
Ghazni	2300 - 5100	15	3480
Kunar	741 - 5000	11	1881
Laghman	2000 - 3000	4	2550
Logar	2000 - 5200	12	3041
Paktia	900 - 3500	17	1666
Paktika	1500 - 4500	12	2572
Parwan	4800	1	-
Wardak	2500 - 4700	13	3507

Explanations:

1. Price Range: The prices obtained are a combination of prices paid by NGOs in 1989 and price quotes obtained from Trucking Companies during August 1989. Some factors impacting above price ranges are:

- i. Payment of extra "charges" on roads by some truckers due to inexperience and lack of contacts
- ii. Changing military/security situation
- iii. Seasonal changes in road conditions
- iv. Use of different routes to reach the same destination

2. No. of price quotes: Total number of individual price quotes from NGOs and Trucking Companies

3. Average: The sum of the individual price quotes divided by total number of quotes

SOURCE: Afghanistan Transportation and Trucking Directory
ACBAR - Agency Coordinating Body for Afghan Relief
Peshawar, November 1989

Chapter 7

CONCLUSIONS AND INTEGRATION WITH PRIOR RESULTS

The statistical survey of cross-border trade produced consistent and reasonably reliable data that supports earlier estimates. The conclusions of the Phase II study are consistent with those of Phase I, and the current study revealed new trends not evident in June 1989. The studies developed common conclusions in terms of quantitative estimates of trade flows and trends in trading procedures. Additional conclusions concerning events inside Afghanistan are new in the Phase II study.

Quantitative Conclusions

For the past several years, and possibly much longer, most trade between Afghanistan and Pakistan has been unofficial—that is, not legal and unrecorded in at least one of the two countries. During 1988 and early 1989, the total volume of unofficial exports of the target commodities from Pakistan to Afghanistan outweighed that of recorded official exports by a factor of about 10 to 1, according to the Phase I interview results. When official trade declined by a factor of 10 during 1989 and unofficial trade maintained its former level, the comparison became even more extreme, with official exports barely reaching 1 percent of the level of unofficial trade (see Table 5-3).

The trends in exports from Afghanistan to Pakistan are less clear, but it is evident that (1) official exports have fallen sharply, by 33 percent through June 1989, following a 10 percent drop the previous year, and (2) certain unofficial Afghan exports of target commodities could be legal trade and may be replacing formerly official trade. The large-scale export of Afghan forest products, however, appears to be new and is certainly illegal under Government of Afghanistan law.

In terms of total shipments, Pakistan and Afghanistan are exchanging a considerable quantity of goods despite unstable conditions inside Afghanistan.

Total shipments of target commodities in each direction amount to more than 500,000 metric tons per year or about 2,000 metric tons per day. Without railroads or reliably available customs posts, and with most major roads closed, this volume of trade must be considered a major feat; and it confirms the resiliency of the cross-border trade system as described in the Phase I report.

Institutional Conclusions

Traders interviewed in both Afghanistan and Pakistan almost universally stated that the major components of the trading system—the financial mechanisms, the agent network, the pricing structures, and the set of relationships between importers and exporters—are capable of sustaining any foreseeable increase in trade with one exception: the transport system. They referred not only to the physical state of Afghan roads but also to the serious restrictions on the free circulation of vehicles as impediments to increased trade. The transport cost estimates developed from the cross-border survey support this observation: transportation costs are the major component of food prices in Afghanistan, and they increase proportionately with distance from major markets. In addition, although our formal quantitative interviews carried out by enumerators inside Afghanistan did not confirm the claim, traders interviewed by the expatriate team stated that transaction costs, including "tips and taxes" paid to various combatants and commanders in Afghanistan, made much trade infeasible. In view of these factors, inter-regional transport inside Afghanistan is emerging as the major bottleneck to relief and resettlement.

Other institutional developments in the cross-border trading system are more positive. Concentration of trading activity in both geographical and individual terms appears to be lessening, which should lead to greater competition and more even allocation of economic benefits. More export activity is taking place outside Peshawar, and more small traders are exporting (although the latter conclusion may be the result of the backgrounds of our interviewers).

Conditions Within Afghanistan

Aside from the price, cost, and volume data already discussed, the formal statistical survey did not address production conditions within Afghanistan. Many traders and NGO officials interviewed by the expatriate team, however, presented information concerning such conditions from their own surveys and trips. The general conclusion is that sufficient food is available in the country, after importation, although local shortages and price increases do appear and food production problems may soon arise. The inter-regional transport problem previously mentioned has led to local wheat

shortages, especially in the northern provinces. In that same area, crop failures have been reported due to locusts, sunnpest, and drought. Food security in Afghanistan, thus, appears precarious.

Every type of analysis conducted for this report leads to a similar conclusion: though Afghans are not starving, this country is on the margin of food sufficiency, and the transportation system for delivering food is on the margin of operability. Imports of wheat account for a large proportion of total consumption, and those imports depend on subsidized wheat from Pakistani markets and donated wheat from U.S. and Soviet sources. The total amount imported is roughly equal to the traditional deficit of the southeastern and central provinces. That deficit is no longer being filled by production from the northeastern and north central provinces, and they may soon produce a deficit of their own. Even in the absence of significant resettlement, Afghanistan will continue to depend to a great extent on imported food, and that food must pass through a very unreliable transportation system. To ensure food security for Afghanistan requires significant attention to its internal transportation problems.

Appendix A

**INTERVIEW METHODOLOGY
AND QUESTIONNAIRES**

Pre-Survey Description of General Methodology of Cross-Border Trade Survey

Following is the field component of the basic methodology for the cross-border survey, precisely as presented to the enumerators at the beginning of their training.

Objectives: This survey is intended to measure the sensitivity of the volume and prices of specified products traded between Afghanistan and Pakistan to certain underlying determinants. Specifically we want to determine the relationship of trade in food products, agricultural inputs, fuels, and construction materials to prices, costs, and availability. These results will help the U.S. Agency for International Development to plan its food and production aid programs during the prospective resettlement of Afghan refugees.

Background: The survey is the second phase of a two-stage study, the first phase of which identified the major underlying factors in cross-border trade, including the major trading routes, financing mechanisms, and commodity groups for both official (legal) and unofficial trade. It was decided early on to include both types of trade for the target commodities, since concentrating on official trade alone would eliminate most of the products of interest (largely food). Export of most food items from Pakistan is illegal and therefore unofficial.

Certain items commonly traded between these two countries are not of interest for this study, including (1) transit goods (largely consumer goods) shipped through Pakistan from or to other countries, (2) drugs, and (3) arms. Though these items may be of interest in other contexts, they are not relevant to the goal of identifying the market conditions for goods required during resettlement.

Survey Design: Due to resource constraints, we are unable to carry out the two most effective means of surveying for our purposes, which would have been (1) a detailed sample survey of all markets in the regions of refugee origin, weighted by numbers of refugees, and (2) a comprehensive traffic count at border crossing points and along major trading routes. However, our initial studies indicated a satisfying degree of consistency among responses of major traders concerning the conditions of trade, even without formal sampling and enumerating.

The present survey, therefore, will target principal traders on both sides of the border. Interview teams will survey importers, exporters, and transporters in five major Afghan bazaars and four Pakistani markets. Five teams of two interviewers each will accompany separate truckers on four round trips between the Pakistani and Afghan markets, completing interviews and observations along the way; they will also interview one large-scale

transporter per team in both the Afghan and Pakistani markets, for a total of 24 transporter interviews.

Each team will also interview two importers and two exporters for each of the major commodities in the target groups listed in the tables accompanying the interview forms. Of course the target commodities are different for the two countries, so that the Pakistani exporters interviewed will deal in different commodities than the Afghan exporters.

The core survey will consist of simple questions requiring either yes-or-no or numerical answers. The same types of information will be requested of each of the three target groups, although more emphasis and credence will be placed on the responses of those most closely involved with the corresponding activities. Not all questions need be answered by all interviewees: only knowledgeable and reliable responses should be recorded, and any obvious opinion should be so noted by the interviewer.

Survey Implementation: The major steps will be as follows.

Selection and Instruction of Teams—During early December, the leader of the AID contracting team will select a survey coordinator and 10-12 enumerators (for a final group of 5-6 teams of 2 each) from the pool of trained and experienced interviewers working with the various NGOs in Peshawar. These individuals will have experience not only with cross-border surveys but with the specific regions they are expected to cover. The team leader will then provide initial instruction to the enumerators on the content and use of the preliminary questionnaires.

Evaluation and Training—After the selection and initial instruction of the survey teams, and after the departure of the team leader, the survey supervisor will carry out a seminar on the preliminary questionnaires and survey design. During the first week of January, the AID contracting team will return to Peshawar and review the results of the seminar. Together with the survey coordinator and the enumerators, they will then adjust methodology and questionnaires, if necessary, and train the teams on expected procedures and results.

Pretest, Pakistan Export Survey—During January, prior to final implementation of the Afghan-side survey, all five teams will carry out a test survey in export-oriented markets in Peshawar. Each team will survey two Pakistani exporters or transporters of each of the target commodities. Results will be used to fine-tune the questionnaires and instructions for the cross-border interviews.

Transporter Survey—These interviews will be carried out initially in Pakistan at the implementation of the cross-border phase. Each team will interview one large-scale transporter in Pakistan and will then accompany two separate truckers to the designated Afghan markets, interviewing the truckers along the way.

Afghan Importer Survey—The teams arriving in the Afghan markets will interview first the recipients of the goods transported by the truckers with whom they rode and then the two largest importers of each of the target commodities.

Afghan Exporter Survey—Using information gathered during initial interviews, the teams will then interview the two largest Afghan exporters of target commodities.

Transporter Survey—Prior to returning to Pakistan, the teams will each interview one large-scale Afghan transporter and will locate separate truckers with whom to return. They will interview the truckers during the return journey.

Pakistani Importer Survey—On arriving in Pakistan, the teams will follow the same procedures as followed for the interviews of Afghan importers, though of course the commodities will be different.

Pakistani Exporter Survey—Due to the importance of this set of interviews, it will be left for last, when the enumerators have reached their highest level of experience with this survey approach. Each team will interview two large-scale exporters of the target commodities.

Retest, All Omitted Items—After review by the AID contracting team, certain elements of these interviews may be repeated.

**Target Commodities for
Export from Pakistan/Import to Afghanistan**

Food

Wheat**

Private Sector
Refugee Camp
Diversion
Donated

Rice**

Fruit*

Sugar**

Salt

Vegetables*

Ghee**

Food Animals*

Other Food

Other Agricultural Products

Finished Wool and Wool Products*

Finished Leather and Leather Products

Agricultural Equipment

Tractors*

Threshers*

Other Agricultural Equipment

Other Agricultural Inputs

Traction Animals

Seed**

DAP Fertilizer**

Urea Fertilizer**

Other Agricultural Inputs

Other Products

Fuels*

Construction Materials*

**** Most important products. At least two reliable interviews.**

*** Important products. Two interviews if possible.**

Other products. At least one interview.

**Target Commodities for
Export from Afghanistan/Import to Pakistan**

Food

Dried Fruit**
Fresh Fruit
Vegetables*
Spices

Non-food Agricultural Products

Medicinal Herbs
Hides*
Wool**
Crop Seed
Other Agricultural Products

Other Products

Fuels*
Construction Materials**

** Most important products. At least two reliable interviews.

* Important products. Two interviews if possible.

All other products. At least one interview.

**Transporter Questionnaire
For Exports from Pakistan to Afghanistan**

INTERVIEWER: _____

DATE: _____

LOCATION: _____

DESTINATION: _____

Instructions to Interviewer: Each interviewer will use this form once or, if necessary, twice: (1) once when leaving the market in Pakistan and (2) once when changing trucks at the border, if necessary. At least one trucker should be an owner-driver and one an employee. Interviewees should respond only to those items about which they have an informed basis for opinion, leaving other items blank. The interviewer should indicate apparent guesses or opinions with a question mark (?).

Introduction for Interviewee: We are collecting data on cross-border trade of food, fuel, agricultural inputs, and construction materials. International aid agencies are interested in supporting and expanding private sector trade in these commodities as a means of aiding in relief and recovery in Afghanistan. We want to estimate both total cross-border trade and the specific extent of trade in these particular commodities.

Interviewee Information

ID _____ Major Product _____ Years Experience in C-B Trade _____

Extent of Business:

Number of Additional Bazaars _____

Also Importer? _____ Lender? _____

Transporter? _____ Other? _____

Interview Questions

1. What is the main product that you export to Afghanistan?
_____ Please estimate the total amount of this product exported from this bazaar to Afghanistan by all sellers and the average wholesale prices over the past twelve months. (Use following table. Specify units of measure and currency.)

Volumes and Prices of _____
(Same Product)
Exported from Pakistan to Afghanistan
By Month During 1989

<u>Month</u>	<u>Wholesale Price In Pakistan</u>	<u>Export Volume From Pakistan</u>
December	_____	_____
November	_____	_____
October	_____	_____
September	_____	_____
August	_____	_____
July	_____	_____
June	_____	_____
May	_____	_____
April	_____	_____
March	_____	_____
February	_____	_____
January	_____	_____
Total (Optional)	_____	_____

2. Please estimate the total amounts of this product exported to Afghanistan over the past twelve months through those route groups with which you are familiar. (Use following table. Specify units of measure.)

Total Volume by Route and Month
For Exports of _____
(Same Product)
From Pakistan to Afghanistan
During 1989

Major Route Groups

	<u>Torkham</u>	<u>Parachinar</u>	<u>Wana</u>	<u>Quetta</u>	<u>Total</u> (Optional)
<u>Month</u>					
December	_____	_____	_____	_____	_____
November	_____	_____	_____	_____	_____
October	_____	_____	_____	_____	_____
September	_____	_____	_____	_____	_____
August	_____	_____	_____	_____	_____
July	_____	_____	_____	_____	_____
June	_____	_____	_____	_____	_____
May	_____	_____	_____	_____	_____
April	_____	_____	_____	_____	_____
March	_____	_____	_____	_____	_____
February	_____	_____	_____	_____	_____
January	_____	_____	_____	_____	_____
Total (Optional)	_____	_____	_____	_____	_____

3. Let's estimate the costs making up the price of goods exported to Afghanistan during summer and winter months, using your product as an example. (Use following table. Specify units of measure and currency.)

Costs and Prices of _____
 (Same Product)
 Exported from Pakistan to Afghanistan
 During June and December of 1989

	<u>December</u>	<u>June</u>	<u>Units</u>
Wholesale Price in Pakistan	_____	_____	_____
Transport Cost, Bazaar to Border	_____	_____	_____
Customs and Tips, Bazaar to Border	_____	_____	_____
Distance, _____ Bazaar to Border	_____	_____	<u>Kms.</u>
Time, Bazaar to Border	_____	_____	<u>Hrs.</u>
Total Product Price at Border	_____	_____	_____
Transport Cost, Border to Bazaar	_____	_____	_____
Tips and Taxes, Border to Bazaar	_____	_____	_____
Mujahideen	_____	_____	_____
GOA	_____	_____	_____
Distance, Border to _____ Bazaar	_____	_____	<u>Kms.</u>
Time, Border to Bazaar	_____	_____	<u>Hrs.</u>
Importer's Markup (Optional)	_____	_____	_____
Wholesale Product Price in Afghanistan	_____	_____	_____
Retailer's Markup (Optional)	_____	_____	_____
Retail Product Price in Afghanistan	_____	_____	_____

4. If trade were to increase 10-fold due to the resettlement of refugees, could the current trade and transport system accommodate the demand? If not, what measures and adjustment time would be necessary? Please mention the effectiveness of the hundi/hawala system of trade finance in particular.

**Exporter Questionnaire
For Exports from Pakistan to Afghanistan**

INTERVIEWER: _____

DATE: _____

BAZAAR/CITY: _____

PROVINCE/COUNTRY: _____

Instructions to Interviewer: Each team will use this form twice in Pakistan for each of the commodities listed in the table of target commodities. After you have introduced yourselves to the market administrator, he can inform you of the major exporters of each of the target commodities. Interview the two largest exporters of each commodity, if possible. Carry out at least two interviews of exporters of each of the commodities listed. If exported agricultural goods other than those listed appear to be of importance for your bazaar, interview the exporters of those goods as well.

Introduction for Interviewee: We are collecting data on exports of food, fuel, agricultural inputs, and construction materials from Pakistan. International aid agencies are interested in supporting and expanding private sector cross-border trade in these commodities as a means of aiding in relief and recovery in Afghanistan. We want to estimate total exports of these commodities from this bazaar, as well as total exports to Afghanistan and the specific extent of trade in these particular commodities.

Interviewee Information

ID _____ **Major Product** _____ **Years Experience in C-B Trade** _____

Extent of Business:

Number of Additional Bazaars _____

Also Importer? _____ **Lender?** _____

Transporter? _____ **Other?** _____

Interview Questions

1. Please estimate the total volume of exports from Pakistan to Afghanistan during December and June 1989 over the one of the following route groups with which you are most familiar, for the commodities with which you are familiar. Include both official and unofficial trade and include public sector (donated) trade if you are familiar with it. Do not include transit trade across Pakistan from other countries. (Use following table. Please specify the units of measure.)

Trade Volume by Route For Exports from Pakistan to Afghanistan During 1989

Route Groups (Circle One)

Torkham, Parachinar, Wana, or Quetta

<u>Products</u>	<u>December</u>	<u>June</u>	<u>Unit of Measure</u>
Wheat, total	_____	_____	_____
Private Sector	_____	_____	_____
Refugee Camp Diversion	_____	_____	_____
Donated	_____	_____	_____
Rice	_____	_____	_____
Sugar	_____	_____	_____
Fruit	_____	_____	_____
Ghee	_____	_____	_____
Food Animals	_____	_____	_____
Other Food	_____	_____	_____
Tractors	_____	_____	_____
Threshers	_____	_____	_____
Other Ag. Equipment	_____	_____	_____
Traction Animals	_____	_____	_____

Seed	_____	_____	_____
Fertilizer	_____	_____	_____
Fuels	_____	_____	_____
Construction Material	_____	_____	_____

2. What size trucks are most commonly used for these routes? _____
3. What proportion of this trade is transported by human or animal power instead of by truck? _____
4. What proportion passes through formal customs channels? _____
5. Let's estimate the transportation costs from this bazaar to _____ (specify destination bazaar or stopping point) as a component of the price of goods, for the same two months, using the product you transport most often as an example. (Use following table. Indicate units of measure.)

Transport Costs and Prices for _____
(Specify Product)
Exported from Pakistan to Afghanistan
During 1989

	December	June	Units
Wholesale Price in Pakistan	_____	_____	_____
Transport Cost, Bazaar to Border	_____	_____	_____
Customs and Tips, Bazaar to Border	_____	_____	_____
Distance, Bazaar to Border	_____	_____	<u>Kms.</u>
Time, Bazaar to Border	_____	_____	<u>Hrs.</u>
Total Product Price at Border	_____	_____	_____
Transport Cost, Border to Bazaar	_____	_____	_____
Tips and Taxes, Border to Bazaar	_____	_____	_____
Mujahidiin	_____	_____	_____
GOA	_____	_____	_____
Distance, Border to Bazaar	_____	_____	<u>Kms.</u>
Time, Border to Bazaar	_____	_____	<u>Hrs.</u>
Importer's Markup (Optional)	_____	_____	_____
Wholesale Product Price in Afghanistan	_____	_____	_____
Retailer's Markup (Optional)	_____	_____	_____
Retail Product Price in Afghanistan	_____	_____	_____

6. If trade were to increase 10-fold due to the resettlement of refugees, could the current transport system accommodate the demand? If not, what measures and adjustment time would be necessary?

**Importer Questionnaire
For Imports to Afghanistan from Pakistan**

INTERVIEWER: _____

DATE: _____

BAZAAR/WALIS WALI: _____

PROVINCE/COUNTRY: _____

Instructions to Interviewer: Each team will use this form twice in Afghanistan for each of the commodities listed in the attached table of target commodities. After you have introduced yourselves to the market administrator, he can inform you of the major importers of each of the target commodities. Interview the two largest importers of each commodity, if possible. Carry out at least two interviews of importers of each of the commodities listed. If imported agricultural goods other than those listed appear to be of importance for your bazaar, interview the importers of those goods as well.

Introduction for Interviewee: We are collecting data on imports of food, fuel, agricultural inputs, and construction materials from Pakistan. International aid agencies are interested in supporting and expanding private sector cross-border trade in these commodities as a means of aiding in relief and recovery in Afghanistan. We want to estimate total imports of these commodities to this bazaar, as well as total imports to Afghanistan from Pakistan and the specific extent of trade in these particular commodities.

Interviewee Information

ID _____ **Major Product** _____ **Years Experience in C-B Trade** _____
Extent of Business: **Number of Additional Bazaars** _____
 Also Exporter? _____ **Financier?** _____
 Transporter _____ **Other?** _____

Interview Questions

1. What is your major product? Please estimate the total amount of this product imported to this bazaar from Pakistan and the average selling prices over the past twelve months. (Use following table. Specify units of measure and currency.)

**Volumes and Prices of _____
(Same Product)
Imported to Afghanistan from Pakistan
by Month During 1989**

<u>Month</u>	<u>Total Imports (Volume)</u>	<u>Total Retail Sales</u>	
		<u>Volume</u>	<u>Price</u>
December	_____	_____	_____
November	_____	_____	_____
October	_____	_____	_____
September	_____	_____	_____
August	_____	_____	_____
July	_____	_____	_____
June	_____	_____	_____
May	_____	_____	_____
April	_____	_____	_____
March	_____	_____	_____
February	_____	_____	_____
January	_____	_____	_____

2. Please estimate the total amounts of the product imported to Afghanistan over the past twelve months through those route groups with which you are familiar. (Use following table. Specify units of measure.)

Total Volume by Route and Month
For Imports of _____
(Specify Commodity)
To Afghanistan from Pakistan
During 1989

<u>Month</u>	<u>Major Routes</u>				<u>Total</u> (Optional)
	<u>Torkham</u>	<u>Parachinar</u>	<u>Wana</u>	<u>Quetta</u>	
December	_____	_____	_____	_____	_____
November	_____	_____	_____	_____	_____
October	_____	_____	_____	_____	_____
September	_____	_____	_____	_____	_____
August	_____	_____	_____	_____	_____
July	_____	_____	_____	_____	_____
June	_____	_____	_____	_____	_____
May	_____	_____	_____	_____	_____
April	_____	_____	_____	_____	_____
March	_____	_____	_____	_____	_____
February	_____	_____	_____	_____	_____
January	_____	_____	_____	_____	_____
Total (Optional)	_____	_____	_____	_____	_____

3. Let's estimate the costs making up the price of goods imported to Afghanistan from Pakistan during summer and winter months, using your product as an example. (Use following table. Specify units of measure and currency.)

Component Costs of Price of _____
(Specify Commodity)
Imported to Afghanistan from Pakistan
During June and December of 1989

	<u>December</u>	<u>June</u>	<u>Units</u>
Wholesale Price in Pakistan	_____	_____	_____
Transport Cost, Bazaar to Border	_____	_____	_____
Customs and Tips, Bazaar to Border	_____	_____	_____
Distance, _____ Bazaar to Border	_____	_____	<u>Kms.</u>
Time, Bazaar to Border	_____	_____	<u>Hrs.</u>
Total Product Price at Border	_____	_____	_____
Transport Cost, Border to Bazaar	_____	_____	_____
Tips and Taxes, Border to Bazaar	_____	_____	_____
Mujahideen	_____	_____	_____
GOA	_____	_____	_____
Distance, Border to _____ Bazaar	_____	_____	<u>Kms.</u>
Time, Border to Bazaar	_____	_____	<u>Hrs.</u>
Importer's Markup (Optional)	_____	_____	_____
Wholesale Product Price in Afghanistan	_____	_____	_____
Retailer's Markup (Optional)	_____	_____	_____
Retail Product Price in Afghanistan	_____	_____	_____

4. If trade were to increase 10-fold due to the resettlement of refugees, could the current trade and transport system accommodate the demand? If not, what measures and adjustment time would be necessary? Please mention the effectiveness of the hundi/hawala system of trade finance in particular.

**Exporter Questionnaire
For Exports from Afghanistan to Pakistan**

INTERVIEWER: _____

DATE: _____

BAZAAR/WALIS WALI: _____

PROVINCE/COUNTRY: _____

Instructions to Interviewer: Each team will use this form twice in Afghanistan for each of the commodities listed in the table of target commodities. After you have introduced yourselves to the market administrator, he can inform you of the major exporters of each of the target commodities. Interview the two largest exporters of each commodity, if possible. Carry out at least two interviews of exporters of each of the commodities listed. If exported agricultural goods other than those listed appear to be of importance for your bazaar, interview the exporters of those goods as well.

Introduction for Interviewee: We are collecting data on exports of food, fuel, agricultural inputs, and construction materials from Pakistan. International aid agencies are interested in supporting and expanding private sector cross-border trade in these commodities as a means of aiding in relief and recovery in Afghanistan. We want to estimate total exports of these commodities from this bazaar, as well as total exports to Pakistan and the specific extent of trade in these particular commodities.

Interviewee Information

ID _____ Major Product _____ Years Experience in C-B Trade _____

Extent of Business: No. of Shops _____ No. Additional Bazaars _____
Also Importer? _____ Lender? _____
Transporter? _____ Other? _____

Interview Questions

1. What is the main product that you export to Pakistan? ____ Please estimate the total amount of this product exported from this bazaar to Pakistan by all sellers and the average wholesale prices over the past twelve months. (Use following table. Specify units of measure and currency.)

Volumes and Prices of _____
(Same Product)
Exported from Afghanistan to Pakistan
By Month During 1989

<u>Month</u>	<u>Export Volume From Afghanistan</u>	<u>Wholesale Price in Afghanistan</u>
December	_____	_____
November	_____	_____
October	_____	_____
September	_____	_____
August	_____	_____
July	_____	_____
June	_____	_____
May	_____	_____
April	_____	_____
March	_____	_____
February	_____	_____
January	_____	_____
Total (Optional)	_____	_____

2. Please estimate the total amounts of this product exported to Pakistan over the past twelve months through those route groups with which you are familiar. (Use following table. Specify units of measure.)

**Total Volume by Route and Month
For Exports of _____
(Same Product)
From Pakistan to Afghanistan
During 1989**

Major Route Groups

	<u>Torkham</u>	<u>Parachinar</u>	<u>Wana</u>	<u>Quetta</u>	<u>Total (Optional)</u>
<u>Month</u>					
December	_____	_____	_____	_____	_____
November	_____	_____	_____	_____	_____
October	_____	_____	_____	_____	_____
September	_____	_____	_____	_____	_____
August	_____	_____	_____	_____	_____
July	_____	_____	_____	_____	_____
June	_____	_____	_____	_____	_____
May	_____	_____	_____	_____	_____
April	_____	_____	_____	_____	_____
March	_____	_____	_____	_____	_____
February	_____	_____	_____	_____	_____
January	_____	_____	_____	_____	_____
Total (Optional)	_____	_____	_____	_____	_____

3. Let's estimate the costs making up the price of goods exported to Pakistan during summer and winter months, using your product as an example. (Use following table. Specify units of measure and currency.)

Costs and Prices of _____
(Same Product)
Exported from Afghanistan to Pakistan
During June and December 1989

	<u>December</u>	<u>June</u>	<u>Units</u>
Wholesale Price in Afghanistan	_____	_____	_____
Transport Cost, Bazaar to Border	_____	_____	_____
Customs and Tips, Bazaar to Border	_____	_____	_____
Mujahideen	_____	_____	_____
GOA	_____	_____	_____
Distance, _____ Bazaar to Border	_____	_____	<u>Kms.</u>
Time, Bazaar to Border	_____	_____	<u>Hrs.</u>
Total Product Price at Border	_____	_____	_____
Transport Cost, Border to Bazaar	_____	_____	_____
Tips and Taxes, Border to Bazaar	_____	_____	_____
Distance, Border to _____ Bazaar	_____	_____	<u>Kms.</u>
Time, Border to Bazaar	_____	_____	<u>Hrs.</u>
Importer's Markup (Optional)	_____	_____	_____
Wholesale Product Price in Pakistan	_____	_____	_____
Retailer's Markup (Optional)	_____	_____	_____
Retail Product Price in Pakistan	_____	_____	_____

4. If trade were to increase 10-fold due to the resettlement of refugees, could the current trade and transport system accommodate the demand? If not, what measures and adjustment time would be necessary? Please mention the effectiveness of the hundi/hawala system of trade finance in particular.

**Transporter Questionnaire
For Exports from Afghanistan to Pakistan**

INTERVIEWER: _____

DATE: _____

LOCATION: _____

DESTINATION: _____

Instructions to Interviewer: Each interviewer will use this form once or, if necessary, twice: (1) once when leaving the market in Afghanistan and (2) once when changing trucks at the border, if necessary. At least one trucker should be an owner-driver and one an employee. Interviewees should respond only to those items about which they have an informed basis for opinion, leaving other items blank. The interviewer should indicate apparent guesses or opinions with a question mark (?).

Introduction for Interviewee: We are collecting data on cross-border trade of food, fuel, agricultural inputs, and construction materials. International aid agencies are interested in supporting and expanding private sector trade in these commodities as a means of aiding in relief and recovery in Afghanistan. We want to estimate both total cross-border trade and the specific extent of trade in these particular commodities.

Interviewee Information

ID _____ Nationality _____ Years Experience in C-B Trade _____

Extent of Business:	Employee _____	No. of Trucks in Firm _____
	Owner _____	No. of Trucks in Firm _____
	Also Importer? _____	Exporter? _____ Other? _____

Interview Questions

1. Please estimate the total volume of Exports from Afghanistan to Pakistan during December and June 1989 over the one of the following route groups with which you are most familiar, for the commodities with which you are familiar. Include both official and unofficial trade. Do not include either transit trade across Pakistan to other countries or returned transit trade from Pakistan. (Use following table. Please specify the units of measure.)

**Trade Volume by Route
For Exports from Afghanistan to Pakistan
During 1989**

Route Groups
(Circle One)

Torkham, Parachinar, Wana, or Quetta

	<u>December</u>	<u>June</u>	<u>Unit of Measure</u>
<u>Products</u>			
Dried Fruit	_____	_____	_____
Fresh Fruit	_____	_____	_____
Vegetables	_____	_____	_____
Spices	_____	_____	_____
Medicinal Herbs	_____	_____	_____
Hides	_____	_____	_____
Wool	_____	_____	_____
Crop Seed	_____	_____	_____
Other Agricultural Products	_____	_____	_____
Fuels	_____	_____	_____
Construction Materials	_____	_____	_____
Other Products	_____	_____	_____

2. What size trucks are most commonly used for these routes? _____
3. What proportion of this trade is transported by human or animal power instead of by truck? _____
4. What proportion passes through formal customs channels? _____

5. Let's estimate the transportation costs from this bazaar to _____ (specify destination bazaar) as a component of the price of goods, for the same two months, using the product you transport as an example. (Use following table. Indicate units of measure.)

Transport Costs and Prices for _____
(Specify Product)
Exported from Afghanistan to Pakistan
During 1989

	<u>December</u>	<u>June</u>	<u>Units</u>
Wholesale Price in Afghanistan	_____	_____	_____
Transport Cost, Bazaar to Border	_____	_____	_____
Customs and Tips, Bazaar to Border	_____	_____	_____
Mujahideen	_____	_____	_____
GOA	_____	_____	_____
Distance, Bazaar to Border	_____	_____	<u>Kms.</u>
Time, Bazaar to Border	_____	_____	<u>Hrs.</u>
Total Product Price at Border	_____	_____	_____
Transport Cost, Border to Bazaar	_____	_____	_____
Tips and Taxes, Border to Bazaar	_____	_____	_____
Distance, Border to Bazaar	_____	_____	<u>Kms.</u>
Time, Border to Bazaar	_____	_____	<u>Hrs.</u>
Importer's Markup (Optional)	_____	_____	_____
Wholesale Product Price in Pakistan	_____	_____	_____
Retailer's Markup (Optional)	_____	_____	_____
Retail Product Price in Pakistan	_____	_____	_____

6. If trade were to increase 10-fold due to the resettlement of refugees, could the current transport system accommodate the demand? If not, what measures and adjustment time would be necessary?

**Importer Questionnaire
For Imports to Pakistan from Afghanistan**

INTERVIEWER: _____

DATE: _____

BAZAAR/TOWN: _____

PROVINCE/COUNTRY: _____

Instructions to Interviewer: Each team will use this form twice in Pakistan for each of the commodities listed in the table of target commodities. After you have introduced yourselves to the market administrator, he can inform you of the major importers of each of the target commodities. Interview the two largest importers of each commodity, if possible. Carry out at least two interviews of importers of each of the commodities listed. If imported agricultural goods other than those listed appear to be of importance for your bazaar, interview the importers of those goods as well.

Introduction for Interviewee: We are collecting data on imports of food, fuel, agricultural inputs, and construction materials to Pakistan from Afghanistan. International aid agencies are interested in supporting and expanding private sector cross-border trade in these commodities as a means of aiding in relief and recovery in Afghanistan. We want to estimate total imports of these commodities to this bazaar, as well as total imports to Pakistan and the specific extent of trade in these particular commodities.

Interviewee Information

ID _____ **Major Product**_____ **Years Experience in C-B Trade** _____

Extent of Business: **Number of Additional Bazaars** _____
Also Exporter? _____ **Lender?** _____
Transporter? _____ **Other?**_____

Interview Questions

1. What is the major product you import? Please estimate the total amount of this product imported to this bazaar from Afghanistan and the average wholesale price in Pakistan over the past twelve months. (Use following table. Specify units of measure and currency.)

Volumes and Prices of _____
(Specify Commodity)
Imported to Pakistan from Afghanistan
By Month During 1989

<u>Month</u>	<u>Import Volume From Afghanistan</u>	<u>Wholesale Price in Pakistan</u>
December	_____	_____
November	_____	_____
October	_____	_____
September	_____	_____
August	_____	_____
July	_____	_____
June	_____	_____
May	_____	_____
April	_____	_____
March	_____	_____
February	_____	_____
January	_____	_____
Total	_____	_____

2. Please estimate the total amounts of the product imported to Pakistan over the past twelve months through those route groups with which you are familiar. (Use following table. Specify units of measure.)

**Total Volume by Route and Month
For Imports of _____
(Specify Commodity)
To Pakistan from Afghanistan
During 1989**

<u>Month</u>	<u>Major Route Groups</u>				<u>Total (Optional)</u>
	<u>Torkham</u>	<u>Parachinar</u>	<u>Wana</u>	<u>Cuetta</u>	
December	_____	_____	_____	_____	_____
November	_____	_____	_____	_____	_____
October	_____	_____	_____	_____	_____
September	_____	_____	_____	_____	_____
August	_____	_____	_____	_____	_____
July	_____	_____	_____	_____	_____
June	_____	_____	_____	_____	_____
May	_____	_____	_____	_____	_____
April	_____	_____	_____	_____	_____
March	_____	_____	_____	_____	_____
February	_____	_____	_____	_____	_____
January	_____	_____	_____	_____	_____
Total (Optional)	_____	_____	_____	_____	_____

3. Let's estimate the costs making up the price of goods imported to Pakistan during summer and winter months, using your product as an example. (Use following table. Specify units of measure and currency.)

Costs and Prices of _____
(Specify Commodity)
Imported from Afghanistan to Pakistan
During June and December 1989

	<u>December</u>	<u>June</u>	<u>Units</u>
Wholesale Price in Afghanistan	_____	_____	_____
Transport Cost, Bazaar to Border	_____	_____	_____
Customs and Tips, Bazaar to Border	_____	_____	_____
Mujahideen	_____	_____	_____
GOA	_____	_____	_____
Distance, _____ Bazaar to Border	_____	_____	<u>Kms.</u>
Time, Bazaar to Border	_____	_____	<u>Hrs.</u>
Total Product Price at Border	_____	_____	_____
Transport Cost, Border to Bazaar	_____	_____	_____
Tips and Taxes, Border to Bazaar	_____	_____	_____
Distance, Border to _____ Bazaar	_____	_____	<u>Kms.</u>
Time, Border to Bazaar	_____	_____	<u>Hrs.</u>
Importer's Markup (Optional)	_____	_____	_____
Wholesale Product Price in Pakistan	_____	_____	_____
Retailer's Markup (Optional)	_____	_____	_____
Retail Product Price in Pakistan	_____	_____	_____

4. If trade were to increase 10-fold due to the resettlement of refugees, could the current trade and transport system accommodate the demand? If not, what measures and adjustment time would be necessary? Please mention the effectiveness of the hundi/hawala system of trade finance in particular.

Appendix B

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Appendix C
PERSONS INTERVIEWED

**A.I.D. and State Department Personnel
(Includes Persons Attending Meetings)**

Islamabad

**Larry Crandall, A.I.D. Representative for Afghan Affairs
John Miller, Deputy A.I.D. Representative for Afghan Affairs**

**Carol Carpenter
Phillip Church
Beverly Eighmy
Thomas Eighmy
John Gunning
John Huxtable
Gary Lewis
Val Mahan
John May
Phyllis Oakley
Andrew Rude
Diana Swain
Nancy Waldhaus
Curt Wolters**

Peshawar

**Masood Akram
Lynn Carter
Henry Cushing
Michael McGovern
Albert Nehoda**

A.I.D. Contractors

Education Sector Support Project

**Gerald Boardman
A. Moqim Rahmanzai**

Ronco and ACLU

**Guy Bowen
Habib, Transport Supervisor
General Khushal Khan
John McHale
George C. Scott
Earl Thieme
John Walker**

Vita

**Mir Mohammad Ashan Sediq, Director, Peshawar
Nec Buzdar, Consultant, Peshawar
Riffat Sardar, Consultant**

Private Sector Traders, Transporters, Merchants

Abdul Jamil, Transporter for Shafiq Sons, Peshawar

Abdul Masir, Large official Pakistani trader, Peshawar

Abdul Salam Sidik, President of the Association of Clearing and Forwarding Agents, Peshawar

Afgal Khan, Shinwari & Co. Importers and Exporters and Commission Agents, Peshawar

Bilyas Bilour, Bilour Flour and General Mills Ltd, Peshawar

Egbal Pervaz, Abdul Salam Sidik's partner.

Hadji Sadjad Hussein, Large official Pakistani trader, Peshawar

Haji Baroz Khan, Export-import broker and forwarder

Haji Jailat Khan, President of Mustafa Yosuf Co. Ltd, Peshawar

Haji Noor Elahi, owner of import-export and clearing firm

Janatullah, Assistant at Ahmad Brothers, Kerosene Dealer/Depot, Peshawar

Karim of Laghwan, Afghanistan, Small fruit trader

Nisar Sethi and Mushtaq Sethi, Sethi Corporation Importers and Exporters, Jinnah Market, Peshawar

Noor Mohammad, Large official Pakistani trader, Peshawar

Shafiq of Shafiq & Sons Importers-Exporters, Clearing Forwarding and Commission Agents, Peshawar

Shafir Ahmad, Large official Pakistani trader, Peshawar

Zia-ul-Haq Sarhadi, partner in customs clearing firm

A livestock dealer, Peshawar

An Afghan agricultural implements trader, formerly vice president of the Chamber of Commerce in Kabul

An unofficial trader in auto parts, ghee, flour, and rice, Peshawar

Five small unofficial tribal traders in the Hyattabad market, Peshawar

Two smugglers, Peshawar, Tribal border area

Currency Changers and Bankers

Afghan currency trader in Chowk Yadgar, Peshawar

Pakistani State bankers at the National Bank

President of Currency Traders' (Zarab Sarafa) Association in Chowk Yadgar

Small Pakistani State banker in Chowk Yadgar, Peshawar

Private Voluntary and Other Agencies

**Lawrence Clarke, Director, Agrisystems Overseas Ltd, Aylesbury, England
(Working with the Agricultural Survey of Afghanistan at the Swedish Committee,
Peshawar)**

**Mohammad Daoud, Afghanaid, Peshawar (An observer just returned from
surveying Mujahedin markets in Afghanistan)**

Azam Gul, Director, Swedish Committee for Afghanistan

**Tom Morrison, Director, Agrisystems, Rome, Italy (Working with the Agricultural
Survey of Afghanistan at the Swedish Committee, Peshawar)**

**Abdulla Naik, Acting Director, Agricultural Survey of Afghanistan, Swedish
Committee, Peshawar**

Peter Reese, Director, Afghanaid, Peshawar

Jane Schuler-Rep, Information Systems Consultant with UNHCR

Muqeen Shah, Transport Officer for the Swedish Committee, Peshawar

Bobby Thami, International Rescue Committee

**David Webster, Administrator, The Agricultural Survey of Afghanistan, The
Swedish Committee, Peshawar**

Government of Pakistan Officials

Assistant Collector of Customs (transit trade), Peshawar

Director, Customs Bureau, Islamabad

Home Minister, Peshawar

Political Agent for Khyber, Peshawar

Tribal Territories border guard, Peshawar

Other Interviewees

Prof. Naseer Mir, Director, Institute of Applied Economic Studies, Peshawar University

Prof. Hussain Mullick, Head of the Department of Economics, Quaid-i-Azam University (the chief economist for the UNHCR cross-border trade study known as "Project Marketplace")

Fazel Nur, Chief of the Afghan Service of the Voice of America (a Pashtun emigre interviewed in Washington prior to departure)