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Our main purpose in this paper is to present the state of the Bolivian economic relations with her close neighbors, given the trend in the region toward economic integration. Distinct features of the paper are the special attention given to location, the role of physical infrastructure, transportation costs, and, to a lesser extent, economies of scale.

When we begun writing the paper, we started with a main focus on border trade in a narrow sense. We soon realized that, given the current liberalization trend, border trade must evolve into economic integrated regions, i.e., regions that cross natural boundaries, but with the important proviso that localization is a central characteristic. Thus, we have devoted much space to explore the scope of border trade extending itself spatially.

International trade theory relies in country differences in factor endowments and efficiency as determinants of trade. In this paper the approach is more empirical, giving a large weight to geographic elements and transportation costs. Border trade and trade in close vicinities, often exhibiting low transportation and communication costs, provide extreme examples of "natural" trading blocks and integration.[1] Regional agreements of economic integration frequently require detailed policies and provisions on factor mobility. Neither of these considerations seem important in border trade, given that policy coordination is frequently irrelevant to the specific towns of contact and labor mobility is somewhat automatic.

Bolivia has a singular geographic position in South America, flanked by five countries, Argentina, Brazil, Peru, Chile and Paraguay. This feature should give to Bolivia's trade distinct advantages. This has not been so, partly because of her landlocked situation, rugged topography and generally poor transportation infrastructure.

[1] "Natural" trading partners are countries who would have done much of their trading with one another, even in the absence of special arrangements. The concept appears in Krugman (1993).

Bolivia's traditional exports have been mainly of high value raw materials, like tin and silver, and of natural gas. Recently, non-traditional exports (that in Bolivia is everything that is not minerals or natural gas) have taken a momentum. These exports are directed, to a significant extent, to our neighbors. As important, the neighbor countries are the most important source of Bolivia's imports. Contrary to what happens in most Latin American countries, for Bolivia the neighbors are among her more important trade partners. A significant share of the trade with our neighbors is deemed to be border trade, although numbers are hard to come by. Difficult internal transportation and communications underscore the importance of border trade for Bolivia.

A recurrent question in the paper is the extent to which some features of border trade can be spread to increasingly larger zones. There is also the related question whether the economic integrated zones should be just extensions of border trade or should they have their distinct characteristics, many of them resulting from bilateral negotiations.

The paper is organized as follows. In Section I we describe the Bolivian trade in the regional context, including some numbers that illustrate the direction of the trade flows. In the same section we survey Bolivia's regional integration agreements, limiting ourselves in the discussion to the arrangements with our close neighbors. In section II we look at some specificities of border relations in the general framework of international trade. Also, we report there Bolivia's main border points and the characteristics of their trade. In section III we explore the implications of enlarging the border trade and constituting economic integrated zones. In section IV we conclude.

I. Main Features of Bolivia's Regional Economic Relations

I.1 The Regional Context

Before focusing on the specific aspects of regional trade, it is worth recalling the main characteristics of Bolivia's trade regime. Since the mid 1980s Bolivia has undertaken a very substantial unilateral trade liberalization. There are not quantitative restrictions, and tariffs have a uniform level of 10%, except a small list of capital goods that bear a tariff of 5%. There is a drawback for non-traditional exports, that due to administrative deficiencies, can become a small subsidy for some goods. Given these features, effective rates of protection are essentially uniform.

Although Bolivia's liberalization policy has been undertaken unilaterally, it responds however to a trend in the region. All countries have been liberalizing their trade substantially.[2] Also, custom unions like the Andean Pact, to which Bolivia belongs, have adopted a policy of low common external tariffs in line with what the individual members were doing. Each country in the neighborhood observes that its trading partners are pursuing policies that are grossly similar to what is followed at home.

Table 1: Balance of trade neighbor countries, 1993
(U$ millions)

	Exports	Imports	Balance
ARGENTINA	125.2	150.5	-25.3
BRAZIL	21.4	130.7	-109.3
CHILE	15.7	92.2	-76.5
PERU	75.0	53.7	21.3
PARAGUAY	1.6	-.-	1.6

Source: Central Bank of Bolivia, Bulletin of the External Sector, No. 11, 1994

The trend is clear, but the countries are still far from a situation of free trade. Their tariff rates continue to be above the ones of most industrial countries. Either as an intermediate step to free trade, or as an end in itself, Bolivia and the other countries in the region have entered since 1992 in a rush of bilateral agreements, that further reduce tariffs and quantitative

[2] For a recent and comprehensive survey, see Agosín and French-Davis (1993).

restrictions. The similarity in economic policies has eased the regional arrangements and has favored them over broader agreements, that may involve countries with different regulations.[3]

Table 2: Bolivia´s direction of trade, 1990-1993

	1990	1993
A. Destination of exports (share of total exports)		
Argentina	25.1	16.6
Brazil	8.3	2.8
Chile	3.6	2.1
Peru	5.6	9.9
Paraguay		
Total to neighbor countries	42.6	31.5
Other Latin American Countries	1.3	7.9
United States	19.6	22.7
Canada	0.0	0.6
European Common Market	28.5	35.5
Japan	0.3	0.6
Other	7.7	1.3
Total:	**100.0**	**100.0**
B. Origin of imports (share of total imports)		
Argentina	10.7	12.5
Brazil	17.2	10.8
Chile	12.8	7.6
Peru	3.2	4.5
Paraguay		
Total from neighbor countries	43.9	35.4
Other Latin American Countries	1.8	3.6
United States	22.5	24.4
Canada	0.9	0.6
European Common Market	14.9	18.9
Japan	10.1	10.8
Other	6.0	6.3
Total:	**100.0**	**100.0**

Source: Central Bank of Bolivia, Bulletin of the External Sector, No. 11, 1994

Table 1 shows that between 30 and 40% of Bolivian exports go to the neighbor countries. Exports to this trading-bloc are only second to the whole European Community.

3 A similar argument is given by Jones (1993). See also de Melo et al., (1993) that observe that the current regionalism is taking place in an environment of outward-oriented policies.

The huge fall in the price, and therefore in the value, of the natural gas sales to Argentina largely explains the decline in the share between 1990 and 1993.

It is readily seen that the neighbor countries are, by far, the most important suppliers of imports to Bolivia. Imports from these countries were as high as 44% in 1990; they still constituted 35% of imports in 1993.

The balance-of-trade of 1993 represents what has happened in recent years (table 2). Bolivia has very substantial deficits with Brazil, Chile and even with Argentina, despite the sales of natural gas and the overvaluation of the Argentinean peso.[4] Only with Peru there is a small surplus. (Data of imports from Paraguay are unavailable.)

The pattern of trade with the region is very similar to the pattern with world as a whole. Bolivia exports to her neighbors mainly food products, like soybeans and sugar, and raw materials like natural gas, timber, hides, and metals. In contrast, she imports from them manufactured goods, machinery and transportation equipment, chemical products and, to a lesser extent, food (table 3). A significant proportion of imports from our neighbors is constituted by semielaborated industrial products. This is due to low transportation costs.

The data in table 2 indicate only official transactions. If estimates of smuggling are added to the official figures, there are significant changes in the trade balances and some of the conclusions above must be modified. The estimates of smuggling for each country are obtained using partner country data on its exports to and imports from Bolivia. The balance including non-registered trade looks more favorable to Bolivia than with the official figures only in the case of trade with Argentina. In the bilateral trade with Brazil, non-registered imports are very large and hence the deficit with non-registered trade is significantly greater than the deficit with registered trade.

The trade pattern with Chile is similar to the one with Brazil, but the differences are not as high. The trade figures with Peru are interesting. During 1991 and the first quarter of 1992 when the sol was significantly overvalued, Bolivia's balance with Peru was positive with registered and non-registered trade, with the latter larger than the former. From the second quarter of 1992 through the first quarter of 1993, the registered trade balance of Bolivia was

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4 The figures in table 2, sourced in the Central Bank, don't coincide with the IMF figures reported in table 4. In the latter case, there would be a small surplus in the bilateral trade with Argentina.

large and larger than the non-registered trade balance. This was the result of higher non-registered than registered imports.

Table 3. Commodity composition of Bolivia's imports from neighbor countries, 1970-1992
(U$ millions)

	1975	1985	1990	1992
From Brazil				
Machinery and transportation equipment	31.6	81.0	63.9	73.3
Manufactured articles	17.9	33.8	39.8	65.1
Chemical products	3.7	13.3	10.6	12.7
Fuels and mineral oils	1.0	1.0	0.2	8.4
Food products and live animals	4.6	0.7	1.1	2.4
Beverages and tobacco	0.2	0.7	1.1	1.1
Raw materials, except fuels	0.4	2.4	0.8	1.1
Vegetable and animal oils and fats	1.5	1.0	0.1	-.-
Merchandises and transactions n.i.e	-.-	-.-	-.-	-.-
From Argentina				
Manufactured articles	11.8	124	38.9	43.2
Machinery and transportation equipment	20.5	11.2	18.7	13.9
Food products and live animals	32.3	77.6	5.0	27.0
Chemical products	4.0	6.1	9.4	10.8
Fuels and mineral oils	0.4	0.5	0.3	4.5
Vegetable and animal oils and fats	2.1	7.0	0.4	2.4
Beverages and tobacco	0.8	-.-	0.4	0.5
Raw materials, except fuels	1.4	0.8	0.5	0.2
Merchandises and transactions n.i.e	-.-	0.1	-.-	0.1
From Chile				
Manufactured articles	4.2	7.8	26.9	35.1
Machinery and transportation equipment	0.5	8.8	40.8	14.0
Chemical products	0.7	2.4	9.4	11.4
Food products and live animals	5.2	3.7	7.0	8.3
Fuels and mineral oils	2.3	0.1	1.5	7.7
Raw materials, except fuels	0.2	0.3	1.9	0.7
Beverages and tobacco	-.-	0.1	0.1	0.2
Merchandises and transactions n.i.e	-.-	0.1	-.-	-.-
From Peru				
Raw materials, except fuels	0.4	2.9	3.6	10.2
Manufactured articles	3.4	5.0	6.3	6.9
Chemical products	2.7	3.6	6.6	5.6
Machinery and transportation equipment	1.5	11.3	4.1	0.7
Fuels and mineral oils	-.-	0.1	-.-	2.3
Food products and live animals	2.0	1.8	1.0	0.9
Beverages and tobacco	-.-	0.1	-.-	-.-
Vegetable and animal oils and fats	0.3	-.-	-.-	-.-
From all neighbor countries				
Manufactured articles	37.3	59.0	111.9	150.3
Machinery and transportation equipment	54.1	112.3	127.5	101.9
Chemical products	11.1	25.4	36.0	40.5
Food products and live animals	44.1	83.8	14.1	38.6
Fuels and mineral oils	3.7	1.7	2.0	22.9
Raw materials, except fuels	2.4	6.4	6.8	12.2
Beverages and tobacco	1.0	0.9	1.6	1.8
Vegetable and animal oils and fats	3.9	8.0	0.5	2.4
Merchandises and transactions n.i.e	-.-	0.3	-.-	0.1

Source: Authors' elaboration with ECLA, 1984 data

As the sol overvaluation was somewhat corrected, contraband imports from Peru started to flow again to Bolivia. From the second quarter of 1993 onward the trade balances reduce themselves and the differences between registered and non-registered trade narrow substantially.

The ultimate goal of LAIA is the establishment of a free trade zone in Latin America. The integration mechanisms calls for bilateral negotiations, that often have been very slow and have lasted more than what was initially foreseen. The Andean Pact is of a larger scope than LAIA, as it intends to convert itself very rapidly into a customs union. The Andean Pact has provided the main reference points for the ambitious trade agreement with Peru.

Table 4: Trade Balance, including contraband, with neighbor countries, 1991 - 1994

Quarter	Argentina		Brazil		Chile		Peru	
	Balance[a]	Balance[b]	Balance[a]	Balance[b]	Balance[a]	Balance[b]	Balance[a]	Balance[b]
91.2	25.3	28.4	-23.9	-53.9	-28.1	-25.0	3.7	4.1
91.3	36.0	37.8	-19.0	-30.2	-23.1	-20.4	3.3	3.9
91.4	25.5	29.5	-30.5	-27.0	-24.4	-21.6	2.0	3.0
92.1	38.9	38.7	-27.8	-51.4	-25.7	-22.7	3.5	4.2
92.2	14.6	16.7	-27.6	-76.2	-9.5	-32.2	10.3	5.7
92.3	16.9	19.0	-31.3	-88.0	-10.7	-36.7	11.2	6.5
92.4	17.8	19.9	-31.3	-93.0	-11.4	-38.0	11.5	6.5
93.1	14.8	17.2	-27.3	-76.3	-35.7	-32.2	11.2	5.9
93.2	-8.2	-4.7	-27.7	-98.0	-19.0	-35.8	5.1	4.0
93.3	-3.1	0.4	-26.8	-109.1	-20.1	-38.6	8.3	5.8
93.4	-1.1	2.3	-26.5	-102.8	-22.0	-41.3	9.5	6.8
94.1	-14.5	-10.5	-33.2	-118.0	-30.8	-34.8	2.8	-0.9
94.2	-8.9	-4.9	-32.3	-116.0	-37.2	-33.0	6.3	4.8

Source: MF, Direction of Trade Statistics
[a] Registered trade only
[b] Registered trade plus contraband estimates

I.2 Regional Integration Agreements

Bolivia has signed several regional agreements on trade and investment. Table 5 summarizes the economic integration schemes to which Bolivia belongs. The most important are, in that order, the Andean Group and the Latin American Integration Association (LAIA). Besides these general schemes Bolivia has signed bilateral trade and investment agreements with Argentina, Brazil, Chile and Peru.

The Bolivian government has stated its willingness to enter MERCOSUR, to which three of our neighbors, Argentina, Brazil and Paraguay belong. Still, under the current MERCOSUR bylaws, if Bolivia wants to join she must leave the Andean Pact. Bolivia is hoping however for a "Doña Flor and her two husbands" approach, by which she could join MERCOSUR while remaining in the Andean Pact.[5] In a different approach, the ongoing conversations between MERCOSUR and the Andean Pact may cushion the costs of abandoning the Andean Pact, should this occur.

Table 5: Bolivia´s outstanding economic integration agreements with neighbor countries

AGREEMENT	ARGENTINA	BRAZIL	CHILE	PERU	PARAGUAY
LAILA[a]	X	X	X	X	X
ANDEAN GROUP				X	
RIVER PLATE BASSIN[b]	X	X			X
AMAZONIAN PACT[b]		X		X	
FREE TRADE				X	
ECONOMIC	X	X	X		
COMPLEMENTARITY			X		
INVESTMENT PROMOTION AND	X	X			X
PROTECTION					
MERCOSUR[c]					

Source: Authors' compendium
Notes: [a] Latin American Integration Association
[b] Essentially, arrangements to jointly improve physical infrastructure
[c] Conversations under way to adhere to this common market

Since 1992 there have been several bilateral trade agreements with our neighbors, taking as a frame of reference either LAIA or the Andean Pact, but with acceleration clauses to reach mutual trade liberalization faster. Note also that the bilateral trade agreements have implications that go well beyond trade. For instance, an expected important by-product is the increase in investment rates. Similarly, there are political economy arguments that emphasize that FTAs enhance the credibility of other economic policies, especially those geared to attract

[5] The expression "Doña Flor and her two husbands" has been used by President Sánchez de Lozada to circumvent the difficult choice.

foreign investment. This is because supranational arrangements diminish the margins for discretionary policies, and reduce the vulnerability of decision-making to interest groups.[6]

The scope of the trade agreement with Peru is very ample. In the framework of the Andean Pact, Bolivia and Peru agreed in 1992 to liberalize almost completely their bilateral trade. The liberalization implies: (a) zero tariffs; (b) the dismantlement of quantitative restrictions applying to products originated in the territory of each country. The two countries acknowledge also the need to eliminate export subsidies and correct domestic policies that distort trade.

Notwithstanding the general character of the liberalization program with Peru, agricultural products have a special treatment. For a list of food products, each country can maintain, in a non-discriminatory fashion, the regulations that were in force at the time of signing the agreement. Also, the two countries assented a reduction of 50% of the surtaxes applying to a list of food products by December 31, 1993. Additionally, they agreed not to extend surtaxes to other products beyond the list in force in 1992.[7]

The agreement with Peru contains safeguards to cover the cases of severe prejudice caused by imports to a given branch. The country hurt by an inordinate flow of imports from the other partner can use transitorily corrective measures, if no accord is reached before. Also, there is an annex with very detailed rules of origin.

Independently of the trade agreement but with implications on it, Peru has offered Bolivia to use freely the port of Ilo, located in her southern region. Also, Bolivia would enjoy the advantages of a free zone there. The port facilities are now almost inexistent and substantial investments would have to be undertaken by Bolivia to use effectively this sea outlet. The road connecting La Paz to Ilo is also in a very poor condition. Still, in the future Ilo could become a competitor of Arica, in northern Chile, as the main port to serve western Bolivia.

Bolivia has also agreements of economic complementarity with Argentina and Brazil, within the framework of the Treaty of Montevideo of 1980 that created LAIA. These agreements provide for the elimination of quantitative restrictions on bilateral exchange, and the enlargement as well as the deepening of tariff preferences for lists of products. They also

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[6] De Melo et al., (1993) highlight these points when discussing the political dimensions of regional integration arrangements.

aim at the formation of joint industrial ventures. The tariff preferences are stipulated in terms of percent reductions of the tariffs applying to imports from third countries.

The accord with Argentina is more encompassing than the one with Brazil. It gives relevance to intra-industry trade, promoting common projects among enterprises of the two signatories, and the formation of bi-national companies. Tariff reductions can go to 100%, for the importation of final and intermediate goods for approved projects of bilateral industrial integration. Also, goods imported in the context of this program can be considered of domestic origin in the computations required to comply with rules of origin.

Interestingly, it is with Chile, the only Bolivian neighbor that does not belong to either the Andean Pact or MERCOSUR, that trade negotiations have been the most active. Also, trade between the two countries has been increasing very rapidly, although it has produced a very large deficit in the Bolivian trade balance with Chile.

Bolivia and Chile signed in 1991 an Agreement on Economic Complementarity (AEC), that falls short of establishing a free trade zone. Nevertheless the agreement has an ample scope to liberalize mutual trade. The stated objectives of AEC are: (1) the pursuit of a growing and progressive economic integration of the two countries; (2) the facilitation of mutual investments in the two countries; (3) the harmonic development of trade between the two countries; (4) the provision of a framework for economic cooperation of all types; (5) the promotion of cooperation between the private sectors of both countries. It is noteworthy in the AEC the concession by Chile without reciprocity of some tariff preferences. This concession was probably prompted by the initial condition of a very large deficit.

Tariff preferences are the main instrument of the AEC. There is a list of items for which zero tariffs apply in both countries for imports from each other. AEC also ratifies previous tariff concessions, given within LAIA, with rates that are still positive. The list of items with tariff preferences can be enlarged by mutual agreement. Also, the tariff concessions within LAIA can be further reduced.

AEC in many ways is more than a trade agreement. It also includes the treatment of mutual investments and outlines the procedures for cooperation in the area of energy. In September 1994, Bolivia and Chile signed an Agreement for the Promotion and Reciprocal

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[7] Bolivia does not use surtaxes but Peru does, under the form of varying specific (countervailing) duties. The agricultural surtaxes have given rise to considerable controversy in our neighbor.

Protection of Investments. The main objective of this agreement is to improve the conditions for capital movements in both countries, including clauses of protection to minimize non-commercial risk.

Regarding energy, there is already a letter of intention signed in 1990, for the sale of Bolivian natural gas to Chile. Also, Bolivia and Chile have agreed to improve the physical infrastructure connecting the two countries. Two railroads operate between the two countries, although the northern one is in dire condition. A highway linking La Paz with Arica through Tambo Quemado is being built now.

The development of Bolivian-Chilean economic relations in a very short span of time has been truly remarkable. It should not be overlooked that since the Pacific War of 1879, their relations had been kept at very low levels most of the time. Even today, the two countries do not maintain diplomatic ties. Fortunately, economic relations are erasing the old resentments on both sides of the border.

The private sectors in both countries have yet to respond to the new incentives created by the negotiations. Misgivings and preconceptions persist. In a survey to private entrepreneurs undertaken by researchers of the Universidad Católica del Norte in Antofagasta, interest on trade and investment with Bolivia showed to be very small.[8] Bolivia's technological and economic backwardness was often cited as a main cause for the lack of interest. While there is not yet a similar survey in Bolivia, skeptical comments have appeared in the press. For instance, there were frequent complaints, especially by agricultural exporters, that the price bands for agricultural products in Chile acted as non-tariff barriers, that annuled the potential benefits of the tariff reductions in the AEC.

Bolivians feel that the results of the trade agreements mentioned above have been somewhat disappointing. Problems of coordination and implementation have limited the possibilities of taking effective benefit. Why then Bolivians persist in joining FTAs and other integrations schemes? There are several answers to this question.

First, Bolivia is geographically in the middle of a zone where all surrounding countries are engaging themselves in free trade areas. Bolivia fears to be isolated from international

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8 It is true that the Second Region, in which Antofagasta is situated, borders with Potosí and Oruro, the poorest departments in Bolivia. If a similar survey were taken in the First Region, more to the north and close to La Paz, the answers may vary.

trade and capital movements should she decide to stay apart. The costs of not belonging to an FTA, when all neighbors do, can be high and impair Bolivia's trade, current and expected.

Second, Bolivia is interested in enlarged markets with preferential arrangements like in a FTA, because many of her non traditional exports, mainly agricultural commodities, face strong competition in international markets. Also they suffer the effects of protectionist policies in, industrial and developing, countries outside the region.

Third, the prospect of more trade with her neighbors provides a strong motivation to improve Bolivia's own transportation network. Moreover, linkages with foreign networks enhance the value of the domestic transportation network. The likelihood of the interconnections increases with FTAs.[9] In addition, an FTA can partially compensate high transportation costs.

Fourth, the trade agreements in the region usually have special temporary clauses that apply to Bolivia and lessen for her the costs of joining. With a FTA Bolivia wins access to the potential benefits up front, while the costs are distributed over a long period.

Last, membership in a FTA is seen as a means to attract direct foreign investment and financing from international lenders. In particular, loans to finance the transportation projects are more forthcoming when they link two (or more) countries involved in a FTA.[10]

The neighbor countries may find interest in Bolivia's participation in their FTA on two accounts. First, while Bolivia's market for their exports is small, it is by no means negligible. Exports, including exports of services, to Bolivia can be especially important for given regions within a country. This is clearly the case of the First Region in northern Chile. In passing, it is this feature that gives leverage to Bolivia's position in the trade negotiations. Second, trade in transit through Bolivia may be of interest. We tackle this point later.

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[9] For example, there is little doubt that the current favorable trade environment with Chile has provided an incentive to build the highway from La Paz to the Chilean border.

II. International Trade and Border Trade

II.1 Main Characteristics of Border Trade

The single most important characteristic of border trade is that transportation costs are very low in the concerned regions. Because of this, trade can be very active, although the overall regional development will depend of several other factors, including the density of population. As transportation costs fall between border towns and the main inland cities there is a natural enlargement of the zone of influence of the border. Large cities, not too far away from the borders, should gain of this for a while.

In the early stages the people engaged in border trade are foremost the local population of the border posts. This trade usually starts with goods for local consumption and low transportation costs from the nearest neighbor country. Once the border post is endowed with government services, like customs, the diversity of the traded goods increases. Trade shifts from local traders to people from the cities in the inner country. The nature of trade also changes.

The first wave of traders usually is of small smugglers. After this initial stage, more developed forms of international trade appear, in which the border towns are mainly used as "transit" points benefiting from the customs, warehousing, and distribution services there. In this stage, the bundle of goods traded on the border posts doesn't differ markedly from the trade bundle of the country as a whole. Trade with Peru, then with Argentina, and lastly with Brazil and Chile, fit the pattern of evolution described above.

There are thus two kinds of border trade: (a) trade at the border points; and (b) trade as a flow through border points. Trade at border points is important in eastern towns like Guayaramerim and, to a lesser extent, Puerto Suarez in Bolivia. These towns receive their supplies from the Brazilian towns of Guajara Mirim and Corumba respectively. Trade as a flow is characteristic of the western border towns. The clearest cases are of Charaña and Tambo Quemado, in the border with Chile (see figure 1).

From another angle, the border economic relationships are of trade of international merchandises and non-factor services, and of factor movements, especially labor. Merchandise

[10] This may be so because income from an enlarged trade would insure repayment of the loan.

trade is of two kinds, goods produced in Bolivia and in the neighbor countries, and goods in transit from third countries. In the latter case, trade with the contiguous countries is in services attached to the transportation and handling of merchandises in transit. For a landlocked country the amounts spent in the importation of these services can be very substantial.

Transportation costs work as a tariff giving protection to a host of activities. In the presence of high transportation costs, the production of some goods is possible even if this is done in a less efficient way than in other countries. The tariff-like effect of high transportation costs may cause a diversified pattern of production, with some industrialization, some of which exhibit increasing returns.

Figure 1: Bolivia´s border towns and main cities

As transportation costs fall the concentration of production occurs naturally, on one side or the other of the national boundary, and may be impeded only by national policy measures, which anyway are difficult to carry out at that level. In addition, the government may deepen specialization by liberalizing the specific constraints spanned by economic policy that block the natural evolution of border trade. In a way, liberalization will act first on border trade enlarging it.

The examination of trade creation and trade diversion, that is fundamental in the assessment of the formation of free trade zones, should apply also to the enlarged border areas. As transportation costs fall in a given region some trade will be diverted from other countries and regions. More important, intra-regional trade increases but so does specialization in production.

Border economic relationships, as stated above, don't limit themselves to merchandises. In fact, cross-border factor movements are becoming increasingly significant. Labor moves freely, often illegally, in the border towns. Besides, the profit opportunities in border towns of purchasing goods there and selling them in major cities induce movements of people from locations far away from the border. This transient population can be very important.

Consequent to the new legal regime of temporary importation for goods that will be reexported, there has been a rush to create free zones for commercial and production purposes (table 6). To date, only the commercial free zones have been active.

The government of Bolivia has been trying to attract investment in maquiladoras in towns close to the borders, although not necessarily so. Because of the absence of a border development policy, almost all free zones are located close to the largest cities of the country.

As is well known, maquiladoras are most advantageous when producing finished products, with a well known technological process, and for large markets that can be easily attained. This is not so in the Bolivian border towns.[11] Bolivia can only offer cheap, unskilled labor. Even so, the quantity of workers on border towns has not yet reached a critical mass to

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[11] In general, maquiladoras produce a relatively elaborated product, with intensive use of labor. They are attracted to a given location if they find following advantages:

(a) Significant savings in labor costs
(b) Low transportation and communication cost with the parent firm central location
(c) The possibility of using qualified management and technical personnel without expatriation
(d) Short down time for repair and new product lines
(e) Control over day to day operations

Except for labor costs, none of the advantages listed above can be found in the Bolivian border towns.

make the towns attractive for maquiladoras. While border towns cannot yet host maquiladoras, the city of La Paz, with its supply of services and abundant labor, has been doing so with some success, especially in the clothing and jewelry industries.

Investment originated in our neighbors in Bolivia or from Bolivia into them is still scant, but is growing rapidly. The growth is so important that Bolivia has signed mutual guarantees for the investments with some countries.

Table 6: Free Zones as of July 31, 1994

Name		Country of Location	Type of Concession	Effective Operations
1.	Zona Franca Oruro S.A.	Bolivia	Comercial & Industrial	Comercial
2.	G.I.T. S.A. - La Paz	Bolivia	Comercial & Industrial	Comercial
3.	G.I.T. S.A. - santa Cruz	Bolivia	Comercial & Industrial	
4.	Central Aguirre Portuaria S.A.	Bolivia	Comercial & Industrial	Comercial
5.	Zona Franca Cochabamba S.A.	Bolivia	Comercial & Industrial	Comercial
6.	Zona Franca Desaguadero S.A.	Bolivia	Comercial	
7.	Zona Franca San Matías S.A.	Bolivia	Comercial	
8.	Zona Franca Guayaramerín S.A.	Bolivia	Comercial & Industrial	
9.	Zona Franca de Cobija - Pando	Bolivia		
10.	Zona Franca Rosario	Argentina		
11.	Zona Franca de Ilo	Peru		

Source: Bolivia's Secretaría Nacional de Industrias

It should be mentioned also that border trade is very sensitive to the general conditions of the open macroeconomy. The government of Bolivia, because of lower tariffs than her neighbors and the remembered experiences of the extreme exchange rate fluctuations in a recent past, strongly emphasizes exchange rate protection. In the 1980s, macroeconomic instability that translated into exchange rate volatility (in nominal and real terms), greatly affected the directions of trade. Domestic producers frequently suffered of what they perceived as unfair competition, when our neighbors depreciated their currency very rapidly. Bolivia could not retaliate devaluing the Boliviano because she was in a moment in which the stabilization of inflation was her top priority. While the extreme instability of the 1980s has vanished, the problem by no means has disappeared.

The effects of macroeconomic instability are felt not only in border trade, but also in the movements of factors. It must be said, in passing, that the border town markets for foreign exchange are very active.

II.2 Main Border Posts

We have intended to identify Bolivia's towns that have an important border trade or are main entrepôts (table 7). Also, we have constructed a table with the populations in the main towns on the other side of the border of contiguous countries (table 8). The map in figure 1 also should be helpful.

The main trade centers with Peru are Desaguadero, Puerto Acosta, Guaqui and Kasani, all on or close to Titicaca Lake. These towns have very small populations, but are near La Paz, and with good road connections. Unit transport costs are moderate. Also, the shores of the Titicaca Lake are among the most densely populated areas of Bolivia and southern Peru even if they are rural. The exchange of goods, services and labor of southern Peru, especially the department of Puno, with La Paz is very dynamic and much of the activity takes places through the points mentioned above. Trade is with Bolivian and Peruvian products, as well as with goods imported from third countries.

Table 7: Main entry points to international ground transportation

From	Limiting Department	Entry Point	Population[a]	Distance to La Paz[b]	Transportation Costs (U$/qq)[c]
Argentina	Potosí	Villazón	23.670	898	2.55
Argentina	Tarija	Bermejo	21.394	1.165	2.55
Argentina	Tarija	Yacuiba	30.912	1.195	2.77
Brazil	Beni	Guayaramerín	27.706	1.080	5.32
Brazil	Pando	Cobija	10.001	1.305	5.11
Brazil	Santa Cruz	Puerto Suárez	9.860	1.451	3.83
Chile	Oruro	Tambo	Rural area	250	1.06
Chile	Oruro	Quemado	292	530	1.06
Chile	Potosí	Pisiga	Rural area	901	2.13
Peru	La Paz	Ollague	5.417	194	0.85
Peru	La Paz	Puerto Acosta	2.755	115	1.28
Peru	La Paz	Desaguadero	5.810	91	0.64
Peru	La Paz	Guaqui Kasani	Rural area	165	1.28

Sources: [a] National Census of 1992
[b] Data from the Geographic Military Institute of Bolivia
[c] Data from the Association of Freight Carriers of Bolivia in U$ per quintal

The trade points with Chile are Tambo Quemado, Ollagüe and Pisiga, that are at very high altitudes and in areas of sparse population. They are barely transit points. The important commerce is directly between La Paz and the Chilean port-cities of Arica and Iquique. Trade, contrary to what happens with Peru, is mostly unidirectional, with goods flowing from that country to Bolivia, and is as much of Chilean products as of overseas products in transit through Chile. The Free Zone of Iquique in Chile is very important in the entrepôt trade. Most goods from the Free Zone arrive to Bolivia by truck through the Tambo Quemado border pass. Although no hard data are available, there are indications that many supplies of consumer durables of non-Latin American origin to western Bolivia like cars and trucks, and electric and electronic appliances go through Iquique. Unpublished data but sourced in reliable informants estimate that trade through Iquique and Arica amounts to U$500 million.

Western Bolivia also trades heavily with the Argentinean border. The trade points are Yacuiba, Villazón and Bermejo. Trade is bi-directional, with the direction often changing with the appreciations/depreciations of the bilateral exchange rates.

In the east, Puerto Suárez, Cobija and Guayaramerín, next to Brazil, are the most important trade points. The position of Puerto Suárez has to be underlined, as this town is adjoint to the medium sized city of Corumba in Brazil. Also, Corumba is connected to Santa Cruz, the Bolivian second largest city, by railroad and a highway is being built now. Again, as happens with Chile, the trade flow is unidirectional with goods flowing from Brazil to Bolivia. In difference with Chile, practically all goods are Brazilian.

There is some trade with Paraguay, consisting almost entirely of overseas products, but this goes through very sparsely populated areas. Most of this exchange is not registered.

It is worth nothing that unitary transportation costs and distance from the border to the city of La Paz are not fully correlated (table 7). For instance, the unit transport costs from Tambo Quemado, on the Chilean border, are lower than from Desaguadero on the Peruvian border, despite a substantial difference in distance. Not surprisingly the highest transport costs are from towns in northern Bolivia next to the Brazilian border. The lowest costs are from Chile and Peru.

The scale of operations with Peru, through Desaguadero; with Chile through Tambo Quemado and the railroad Arica-La Paz; and with Brazil through Puerto Suárez, can be on occasion massive. Large, well established, importers coexist with also large smugglers. Some border towns are progressively becoming important suppliers of services.

The border economy is still weakly integrated to the rest of the economy. However, their integration can be foreseen principally through the services that border towns could offer to facilitate trade. These services could be especially relevant for bulky products, like semielaborated industrial inputs, that constitute a high share of Bolivian imports, as stated above. Also special border services are needed for most Bolivian non-traditional exports, that are also bulky.

The border zones do not and are not expected to generate in the next years much income to the economy from activities in the production of goods. Only, when a fully integrated economic region is constituted this may occur.

As it stands now border trade is not significant enough. Domestic transportation and communications with the border towns that have been cited, except those close to La Paz, are precarious, insufficient to develop high volumes of trade. Most border towns lack the basic infrastructure, like warehouses. Often, individual operations are very tiny, although they involve large numbers of people. Most of the small scale trade is contraband.

Along the borders of Bolivia there is nothing close, not even a small scale replication, to the economic regions across borders constituted by the northeast United States and Ontario in Canada, or the industrial belt of western Europe with regions of France, Belgium, Luxembourg and Germany. Except near La Paz, there is little industrial activity. Only trade is active.

The development of border towns is marred by two problems, that cannot be overcome by incentives for investment and production. First, none of the neighbor countries has a large economic center near the border town (table 8). Second, economic instability, particularly in the 1980s, severely hurt the development prospects of the towns.

III. Potential Benefits and Costs in the Expansion of Border Trade

Border trade can contribute to growth in two major ways. First, by using the advantages of location, which are related to economies of scale and agglomeration, externalities, and increasing returns. Trade as a flow through border points can indeed generate economies of scale, especially if we think in terms of a hub and spokes model. Hubbing in Bolivia has the potential to reduce significantly the costs of trade among the countries in the immediate vicinity.[12] Still, this potential to become reality requires a good transportation infrastructure, warehouse services, and a very efficient distribution system.[13]

Second, some characteristics of border trade can be extended to increasingly wider spaces. The unique geographic situation of La Paz needs to be underscored in this context. It is only 500 Km. away from Arica, 800 Km. from Iquique, 250 Km. from Puno, 280 Km. from Juliaca, and 400 Km. from the port of Ilo. La Paz is the largest city in the area, and Arica and Iquique are significantly farther from Santiago or any other large Chilean city than from La Paz. Similarly, Puno, Juliaca and Ilo are farther away from Lima or any other large Peruvian city than from La Paz. Northern Chile and, especially, Southern Peru could greatly benefit from their proximity to La Paz. In turn, La Paz can gain from access to the ports, the transportation facilities and other services, and the markets that these regions provide.

Regional leaders in Chile, Bolivia, and Peru, mainly in the first cited country, have advanced the idea of a large integrated zone. The zone would include the First and Second Regions of Chile, the southern departments of Peru, western Bolivia, especially the area surrounding La Paz, and northwest Argentina. The ideas that have been thrown for the integrated zone include pell-mell the following. The undertaking of major improvements in the existing port and storage facilities in Chile, the construction of the port of Ilo in Peru, and the multinational coordination of efforts to modernize the railroad network as well as to pursue the program of highway constructions in the integrated region. There is not yet a formed blueprint.

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12 Hubbing is frequent in the market for air traffic. Economic theory and empirical evidence shows that hubbing reduces airline total costs. Also confers market power to the airline in the hub.

13 For example, if instead of making round trips from Arica to La Paz warehouses in Tambo Quemado (on the Chilean border) are built, high tonnage haulers can go from Arica to Tambo Quemado and then distribute their cargo in smaller trucks to the cities in western Bolivia. Also, high tonnage haulers can go from Bolivia to Tambo Quemado and distribute their cargo it in the northern Chilean cities with smaller trucks. The transportation mode will depend very much on merchandise. In both cases there will be gains in efficiency.

Bolivia aims at converting herself in a major supplier of natural gas, competing in this endeavor with northern Argentina, that also has large deposits. She also aspires to become a distribution center of natural gas to the region. Since transportation for that energy is through ducts, geography does matter. The hub and spokes model will fully apply to a regional market for natural gas, with a hub in the eastern department of Santa Cruz.[14]

Also, it is through Bolivia that a main railroad link between the Atlantic and the Pacific can be completed. The conclusion of the railroad linkage between the eastern and western networks in Bolivia, for which only a stretch is missing, could provide in particular a ground access for Brazilian exports to the Pacific Basin. Brazil could then export through Bolivia to Chile, Peru, and beyond to countries in the Asian Pacific rim. Obviously, trade in the other direction also would be possible. Also, we could think of Peru trading with Argentine through Bolivia.

Table 8: Population of neighbor countries in main towns close to Bolivia

Argentina (Province)	**Town**	**Inhabitants**
Jujuy	Santa Catalina	3.163
	Yavi	16.641
Salta	San Salvador de Jujuy	229.500
Source: 1991 Census	Salta	373.857
Brazil (State)	Guajara Mirim	34.755
Rondonia	Corumba	81.145
Matto Grosso do Sul	Porto Muritinho	11.688
Source: Anuario Estadístico do Brazil, 1985		
Chile (Region)	Arica	250.000
First	Iquique	149.482
		385.600
(Total First Region)		
Source: Banco Centralde Chile, 1989-1993		
Peru (Department)	Puno	196.488
Puno	Huancané	109.113
Source: Estadísticas del Peru, 1987		

14 The most important market in the region, by far, is Brazil. There are only a few remaining obstacles to the construction of a gasduct from Santa Cruz in Bolivia to Sao Paulo in Brazil. The gasduct will carry Bolivian gas as well as gas from Peru and, possibly, Argentina.

Since mining is a very important activity in the region, we can expect the formation of joint ventures and multinational enterprises, with firms of the four concerned countries. This natural outcome of market forces can be given an additional push with the coordination of reforms in the national legislations on mining, and of public investments in infrastructure that support the mining activity.

As a prerequisite for the economic integrated zone, the current agreements of economic complementarily have to evolve toward the more advanced form of free trade agreements. Within an economic integrated zone, many foreign industries will find convenient to produce in Bolivia. These firms could secure the market of Bolivia and her neighbors. If they reach sufficient dimension they can go also outside the region.

The discussion above seems conducing to the conclusion that expanding border trade and, more generally, joining FTAs should be welfare improving, both domestically and globally. This conclusion needs upon closer examination some qualifications, as international trade along with benefits also generates risks. Bolivia's initial condition of significant economic backwardness vis-à-vis three of her neighbors creates the danger that her low degree of industrialization would decrease even more. Production risks being confined to primary products, using location-specific factors (land and mineral resources), with little technological spillovers, and without the benefit of increasing returns to scale. As an outcome of the process she would be driven to a long lasting situation of very low wages and incomes.[15] The core-periphery model could be replicated in a regional scale, and Bolivia could be pushed toward the outer ring. The gap in wages and incomes relative to those of the more advanced neighbors would narrow only when transportation costs fall further, when the advantages of location become less important, and the mobility of industry increases.[16]

Still, backtracking in the current liberalization program cannot be a realistic approach to the danger mentioned in the paragraph above. In addition, the enforcement of regulations

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[15] There could be de-industrialization in the aggregate. Obviously, this does not imply that all industries would decline. In fact, some particular industries may greatly benefit of the lowering of transportation costs and of the tariff preferences. To cite a current example, exports to the United States of some branches of the clothing industry have become profitable thanks to a fall in the relative price of airfreight and the tariff reductions in that market. As another example, exports of plugs and sockets to Argentina, transported by air, have grown very rapidly.

[16] This is the prediction in a global context of the model of Krugman and Venables (1994).

restraining trade has been always very difficult and costly, although not completely ineffective, on a vast territory with low population density.[17]

The proper response to the challenge is gaining, perhaps just maintaining, high productivity in proven sectors of natural resources and, ironically in view of what has been said above, in exploiting advantages in location. Some Bolivian resource-based industries (e.g., edible oils, manufactures of non-ferrous metals and wood) have shown that can compete well internationally. The possibility of exploiting the advantages of location have been dealt amply above.

[17] A reduction in the pace of building infrastructure would be even more farfetched.

IV. Conclusions

We have surveyed in the text the current conditions of border trade. We can conclude that the importance of this trade cannot be underestimated, even if on surface seems remote to the main trade policy concerns. Locally, border trade has the potential to increase production and consumption in regions that often are far from the main cities. It means economic activity in areas that otherwise would have very little and is a source of stable incomes.

More important, even if the concentration of population in the border areas is low, they may have good prospects as transit and distribution centers for goods for the inland country. They have the potential to become important suppliers of services. Also, there is high labor mobility in the border points, with workers moving easily from one side of the border to the other.

Border trade has been in many ways a predecessor of the current attempts at regional integration. Goods and factors have circulated freely for years in limited areas across national boundaries. As the costs of transacting over space decrease and the policy-generated walls to international trade disappear many (but not all) characteristics of border trade will naturally spread to the rest of the economy. Yet, geography will continue to have policy relevance. Even more, economic policy should strive to draw maximum benefit of location. One avenue for this is the formation of economic integrated regions, with region taken in a somewhat narrow meaning.

The economic integrated regions may be, in difference with border trade, intensive in economic policy and international negotiations. This places the problem in the context of preferential trading arrangements and joint spacial planning. The national policy problem is then whether to have a single trade policy, pursuing unilaterally further liberalization, or to have a set of bilateral agreements, on a quid pro quo basis, one with each partner country or, eventually, groups of countries. The advantages of a unilateral and non-discriminatory process should not be discarded outright, given Bolivia's economic size. The problems of timing and opportunity in the liberalization call however for bilateral and regional arrangements, including those concerning integrated zones.

The constitution of economic integrated regions doesn't produce only uncontested benefits. Unfortunately, the dissimilarity in the level of Bolivia's development vis-à-vis her neighbors conditions the distribution of economic activities. Unless great domestic efforts are consented, our country faces the risk of remaining stuck with only primary sectors. The question of Bolivia's national advantages from preferential trade agreements with countries of significant larger economic size in the close vicinity has yet to have an unambiguous answer.

Last, long term Bolivia's integration to other economies cannot be limited to agreements with only the five contiguous countries. At some point the decline in transportation costs will reduce the advantages of integrated economic zones, geographically close. Bolivia, following another trend in Latin America, may find in her interest to apply to integration schemes with large, developed countries.

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