Reintegration into the world economy is central to Lithuania's transition to a market economy. Following the massive shock of the loss of its traditional markets and a sharp deterioration in its terms of trade, Lithuania embarked on an ambitious stabilization and reform program supported by the International Monetary Fund, the World Bank, and other multilateral and bilateral creditors. Under this program of economic revitalization, trade policy reform is aimed at opening the economy and redirecting foreign trade to encourage export-led growth and to facilitate imports of capital goods.

This paper examines Lithuania's reintegration strategy, analyzing the trade and payments regime, exchange rate developments, and efforts to gain greater access to western markets through the European Union. Its findings may be summarized as follows. First, the initial trade shock associated with the dissolution of the former Soviet Union was massive, exceeding the trade shocks experienced in most other transition economies. Second, Lithuania's trade and payments regime appears relatively liberal, notwithstanding a recent reversal in trade policies. Third, as part of a bargaining strategy to position itself for membership in the European Union and the World Trade Organization, Lithuania has recently adjusted the level and dispersion of its trade barriers. Fourth, while in the energy sector technical and logistical constraints are hampering the redirection of foreign trade, redirection has succeeded in most other areas. Fifth, with nontradable activities gaining in importance, the Lithuanian economy appears less open than in the prereform period. Finally, the geographic redirection of trade has been accompanied by a considerable shift in the composition of exports and imports.

The paper concludes that Lithuania's strategy of bilateral, regional and global integration has been generally successful. While foreign trade has been redirected faster than predicted, the paper argues that Lithuania's future reintegration process will increasingly depend on its trading partners' policies.
I. Introduction

In the interwar period, Lithuania was highly integrated into the world economy. Following its independence from Russia in 1918, foreign trade expanded rapidly, and by the late 1920s Western Europe accounted for nearly 80 percent of Lithuania's exports and imports. At the same time, Russia's share stagnated, partly reflecting its foreign trade policy aiming at autarky. However, under central planning this process was completely reversed. Treating the union as one economic unit, a tightly intertwined economy was developed by Soviet planners that resulted in substantial interrepublican trade but relatively little trade with the outside world. By the late 1980s, Russia, the Baltics, and other republics of the former Soviet Union (FSU) represented more than 80 percent of Lithuania's foreign trade, while trade with former member countries of the Council for Mutual Economic Assistance (CMEA) accounted for an additional share of some 10 percent. Thus, Lithuania's trade with Western countries was almost negligible.

The reintegration into the world economy has been a central part of Lithuania's transition to a market economy. Following a massive trade shock due to the loss of traditional markets and a sharp deterioration in its terms of trade, Lithuania embarked on an ambitious stabilization and reform program in 1992 supported by the International Monetary Fund, the World Bank, other multilateral institutions and bilateral creditors. Under this program, trade policy reform has been assigned a key role, aiming at opening up the economy and reorientating foreign trade in order to encourage export-led growth and facilitate imports of capital goods to revitalize the economy. In tandem with price reform, this strategy has entailed, first of all, a significant liberalization of Lithuania's trade and exchange regime aimed at aligning domestic prices with world market prices. At the same time, important efforts have been made to gain greater access to Western markets, while trying to put Lithuania's trade relations with its traditional trading partners on a more predictable and market-related basis. On a bilateral level, several free trade and most favored nation (MFN) agreements have been concluded, while other industrial countries have unilaterally granted Lithuania preferential treatment under their Generalized System of Preferences (GSP) schemes. In addition, Lithuania has applied for membership in the World Trade Organization (WTO), which will make it subject to an extensive system of multilateral trading rules and disciplines. Finally, Lithuania has shown a strong interest in deepening economic integration with the European Union (EU) that has recently culminated in an Association Agreement.

In examining Lithuania's reintegration strategy, this paper is organized as follows: Section II analyzes Lithuania's trade relations in the pre-
reform period and the trade shock resulting from the move to world market prices and the collapse of interrepublican trade, payments and monetary arrangements. Section III discusses Lithuania's trade and exchange regime and evaluates exchange rate developments. Section IV studies the political economy of trade restrictions and examines Lithuania's market structure and its role in the recent reversal of trade liberalization. Section V focusses on Lithuania's efforts to gain greater access to Western markets, in particular the EU. Section VI examines the empirical evidence on Lithuania's reintegration process. Section VII concludes the paper.

II. The Dissolution of the Former Soviet Union and the Trade Shock

1. Production structure and foreign trade in the pre-reform period

Before Lithuania regained independence in 1991, it was fully incorporated in the planning process of the FSU. All important decisions were taken in Moscow, including the allocation of resources at centrally determined prices, the coordination of interrepublican trade, and the management of trade relations with other countries. Endowed with limited natural resources but with a highly skilled labor force, Lithuania was assigned the role of producing technologically advanced products. Thus, a production structure was developed that was concentrated primarily on machine building, metal processing, light industries, and chemical industries. In addition, food processing played an important role reflecting Lithuania's traditional role as an agricultural producer. With a share of more than one third of Lithuania's net material product (NMP), the industrial sector was the most important one of the Lithuanian economy, followed by agriculture and construction. While Lithuania's share in the Soviet Union's NMP was only 1 1/2 percent, its exports and imports amounted to about 3 percent of total interrepublican trade. Heavily dependent on raw materials and energy, Lithuanian enterprises imported above all primary and intermediate goods and exported finished goods and processed food products (Chart 1). 1/

As in the rest of the FSU, many enterprises were large and had on average more than 800 employees. Some 600 hundred of them were all-union enterprises directly controlled by Moscow, with monopolistic or oligopolistic positions in the FSU markets. In several industries, such as energy, chemicals, or machine building, these enterprises produced primarily for export to other republics rather than for the home market (Chart 2). As a result of this close integration, the bulk of Lithuania's foreign trade was with the FSU. In the late 1980s, more than 90 percent of Lithuania's exports went to the FSU, and about 80 percent of its total imports came from this region. The most important single trading partner was Russia, with a share of more than 50 percent in Lithuania's total trade. Ukraine and Belarus were also important trading partners, while Lithuania's Baltic

1/ For a detailed analysis of interrepublican trade relations before the dissolution of the FSU, see in particular Belkindas and Sagers (1990).
Chart 1. Commodity Composition of Foreign Trade, 1987

(in percent)

Source: Lithuanian Department of Statistics
(average in percent of total production by sectors)

Source: Lithuanian Department of Statistics
neighbors Estonia and Latvia played virtually no role due to very similar
production structures. As far as foreign trade with non-FSU countries was
concerned, about half of it was conducted with former member countries of
the CMEA, particularly Poland and the former German Democratic Republic.
Thus, trade with non-centrally planned economies was almost negligible.

Tightly intertwined with the Soviet economy, foreign trade had a sizable
share in Lithuania's NMP, with exports and imports accounting for about 50
and 60 percent, respectively. Valued at actual transaction prices, Lithuania's trade balance with the FSU was highly negative for most years of
the 1980s, although at the end of the decade a small surplus emerged. With
imports from non-FSU countries far exceeding exports to this region,
Lithuania's total trade deficit amounted to some 10 percent of NMP (Table
1). Valued at world market prices, however, Lithuania's trade deficit would
have been considerably larger. For 1987, for example, the International
Monetary Fund et al. (1991, vol. 1, pp. 227) estimated that Lithuania's
interrepublican trade would have shown a deficit of some rub 3.3 billion
compared with an actual deficit valued at transaction prices of only rub 0.4
billion. This huge difference largely reflects Lithuania's dependence on
Russian energy supplies, whose domestic prices were only a fraction of the
world market price. Although Lithuania's exports to other republics were
also underpriced relative to international prices, this gap was considerably
smaller, implying that Lithuania was a net receiver of implicit subsidies.

2. How large was the trade shock?

Recent empirical studies suggest that these subsidies were very large.
In a counterfactual exercise, Tarr (1994), for example, estimated the
percentage change in the relative price of exports to imports for all 15
countries of the FSU, assuming that the same volumes were traded and these
volumes were valued at international prices that prevailed in the same year.
Examining interrepublican trade flows in 1989 and 1990 at the 105-sector
level of disaggregation, he found a negative change in Lithuania's
interrepublican terms of trade of 36 1/2 percent based on 1990 data and
almost 41 percent based on 1989 data. This deterioration was only partly
offset by improvements in Lithuania's extrarepublican terms of trade,
resulting in an estimated deterioration in Lithuania's total terms of trade
by 30 1/2 percent and almost 35 percent based on 1990 and 1989 data,
respectively. In terms of GDP, this would have implied a loss of 10 and 13
percent, respectively. Similar results were presented by Senik-Leygonie and
Hughes (1992), who estimated the total potential terms of trade shock at 25
percent based on 1987 data.

While these estimates were derived under the assumption of a fixed bundle
of exports and imports, the actual terms of trade shock was even larger when
prices were gradually raised to world market levels beginning in late 1991.
By the end of 1992, virtually all goods were priced according to
international prices, contributing to a sharp decline in import and export
volumes and exacerbating the adverse effects that resulted from disruptions
Table 1. External Trade 1988-90

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<tr>
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<tr>
<td>(millions of rubles)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total exports</td>
<td>5,958</td>
<td>6,325</td>
<td>6,989</td>
</tr>
<tr>
<td>FSU</td>
<td>5,431</td>
<td>5,850</td>
<td>6,575</td>
</tr>
<tr>
<td>rest of world</td>
<td>527</td>
<td>475</td>
<td>414</td>
</tr>
<tr>
<td>Total imports</td>
<td>7,488</td>
<td>7,352</td>
<td>8,125</td>
</tr>
<tr>
<td>FSU</td>
<td>6,239</td>
<td>5,789</td>
<td>5,509</td>
</tr>
<tr>
<td>rest of world</td>
<td>1,249</td>
<td>1,563</td>
<td>1,616</td>
</tr>
<tr>
<td>Trade balance</td>
<td>-1,530</td>
<td>-1,026</td>
<td>-1,136</td>
</tr>
<tr>
<td>FSU</td>
<td>-808</td>
<td>61</td>
<td>66</td>
</tr>
<tr>
<td>rest of world</td>
<td>-722</td>
<td>-1,087</td>
<td>-1,202</td>
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(in percent of NMF)

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<tr>
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</thead>
<tbody>
<tr>
<td>Total exports</td>
<td>50.4</td>
<td>49.8</td>
<td>52.6</td>
</tr>
<tr>
<td>FSU</td>
<td>45.9</td>
<td>46.1</td>
<td>49.5</td>
</tr>
<tr>
<td>rest of world</td>
<td>4.5</td>
<td>3.7</td>
<td>3.1</td>
</tr>
<tr>
<td>Total imports</td>
<td>63.3</td>
<td>57.9</td>
<td>61.3</td>
</tr>
<tr>
<td>FSU</td>
<td>52.7</td>
<td>45.6</td>
<td>49.0</td>
</tr>
<tr>
<td>rest of world</td>
<td>10.6</td>
<td>12.3</td>
<td>12.3</td>
</tr>
<tr>
<td>Trade balance</td>
<td>-12.9</td>
<td>-8.1</td>
<td>-8.7</td>
</tr>
<tr>
<td>FSU</td>
<td>-6.8</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>rest of world</td>
<td>-6.1</td>
<td>-8.6</td>
<td>-9.2</td>
</tr>
</tbody>
</table>

Source: Lithuanian Department of Statistics.
in interrepublican trade, payments, and monetary arrangements. Thus, the total trade shock probably exceeded 40 percent and amounted to almost 20 percent of GDP. 1/ In fact, these income losses were substantially larger than in most other countries in Central and Eastern Europe, which according to Rodrik (1994, p. 339) amounted to some 7-8 percent in Hungary and former Czechoslovakia and 3 1/2 percent in Poland. Taking into account multiplier effects, the trade shock is therefore likely to have accounted for a substantial part of the cumulative decline in GDP during 1991-93, which has been estimated at more than 50 percent (Knöbl et al., 1994).

In order to arrest the sharp contraction in output and establish the preconditions for a sustained economic recovery, Lithuania embarked on an ambitious stabilization and reform program in mid-1992. In the initial phase, this program aimed primarily at addressing the serious macroeconomic imbalances that had resulted from the terms of trade shock as well as from disruptions in trade, payments, and monetary arrangements with Russia and other FSU countries. Therefore, particular importance was attached to restrictive financial policies, initially supported by a statutory incomes policy. Later on, however, increasing emphasis has been put on structural reforms concentrating on institution building and rationalization of economic incentive structures. These reforms have been supported by considerable financial resources from the IMF under various arrangements, including the Systemic Transformation Facility that was introduced especially to assist countries experiencing balance of payments difficulties as a result of severe disruptions in their traditional trade and payments arrangements. Significant balance of payments assistance has also been provided by the World Bank under an import rehabilitation loan, and by the European Union and other bilateral G-24 creditors.

III. Trade and Exchange Rate Policies in Transition: An Overview

Trade policy reform has been assigned a key role in Lithuania’s stabilization and reform program. Initially faced with a severe shortage of convertible foreign exchange, Lithuania tried to rely on bilateral trade agreements concluded with Russia and other FSU countries. These agreements aimed at overcoming the payments problems in the FSU through barter; maintaining traditional markets for goods that were regarded as unsalable elsewhere; ensuring supplies of key imports, especially energy and raw materials; and cushioning the terms of trade shock resulting from the move to world market prices. In order to enforce the agreements, a comprehensive system of state orders, production quotas, and export licensing was established. However, the system of bilateral agreements proved ineffective. Actual deliveries fell far short of what had been foreseen in

1/ Strictly speaking, the market-loss effect (Rodrik, 1994) should be separated from the terms of trade effect. However, in actual calculations a clear distinction between the two effects is not possible as they involve discrete (as opposed to infinitesimal) changes in prices and volumes.
the trade agreements, resulting in significant domestic shortages of critical goods and contributing to a sharp decline in output (Kirmani et al., 1994; Knöbl et al., 1993 and 1994).

Bilateral agreements concluded with former CMEA member countries proved equally unsuccessful in preventing severe disruptions in foreign trade. Under these circumstances, Lithuania decided to speed up price liberalization, thus allowing the gradual removal of quantitative export restrictions with the aim to establish a more outward-oriented trade regime. In mid-1993, a new trade law was adopted, under which virtually all remaining quantitative restrictions on exports were eliminated. For a few agricultural products and some raw materials, they were replaced by tariffs. On the import side, a nearly uniform tariff structure with low rates was introduced, with a few basic food products, alcohol and tobacco, and about a dozen categories of manufactured goods carrying higher tariff rates. At the same time, specific import taxes of 10 percent on imports in hard currency and "statistical" import (and export) duties, which had been introduced for purposes of recording information on trade flows, were abolished. These measures were accompanied by a progressive removal of payments restrictions, phasing out export surrender requirements and unifying the exchange rate. In early 1994, this liberalization culminated in the acceptance of the obligations of Article VIII of the Fund's Articles of Agreement establishing formally current account convertibility.

Since the introduction of the new trade law, however, trade policies have been characterized by a stop-and-go process. On the export side, tariffs have been largely eliminated, while at the same time temporary export prohibitions have been extended for five product groups to protect a small number of domestic processors of primary products. On the import side, there have been more than a dozen changes in the import tariff structure, some of which have been introduced in tandem with amendments to the tax system such as the introduction of a value added tax. Some amendments have meant a liberalization of Lithuania's import regime, e.g., the replacement of specific by ad valorem rates for most goods or the introduction of a duty draw-back provision, whereby goods used for production of exports can be fully or partially exempted from import duties or other taxes. On balance, however, these changes have resulted in both higher average tariffs and a greater dispersion of tariff rates.

Notwithstanding some reversal of trade policies, overall Lithuania's trade regime has remained relatively liberal (Table 2). Apart from temporary prohibitions for a small number of product groups, which do not apply to countries that have signed a free trade agreement with Lithuania, and specific regulations governing trade in certain sensitive goods, there are no export restrictions. Import restrictions are almost exclusively based on tariffs, with the exception of some tariff quotas. With more than 70 percent of all product lines being zero-rated (Chart 3a), the unweighted
Table 2. Trade and Payments Restrictions (June 1995)

<table>
<thead>
<tr>
<th>Restrictions</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>on exports</td>
<td></td>
</tr>
<tr>
<td>tariffs</td>
<td>Tariffs are used only vis-à-vis countries that have signed free trade agreements for goods that are subject to bans otherwise (see below).</td>
</tr>
<tr>
<td>quotas</td>
<td>None</td>
</tr>
<tr>
<td>bans</td>
<td>temporary prohibitions (until May 1, 1996) on red clover seeds; feathers and down used for stuffing; raw hides and skins; unprocessed pine and birch timber with thin end diameter not less than 20 cm; unprocessed oak and ash timber; and glands and other organs used for pharmaceutical products and organotherapeutical uses without quotas issued by the Ministry of Health Care. Prohibitions do not apply to countries that have signed free trade agreements with Lithuania. Special government regulations concerning strategic goods and technology, cultural objects, and non-ferrous scrap and waste (apply also to imports).</td>
</tr>
<tr>
<td>on imports</td>
<td></td>
</tr>
<tr>
<td>tariffs</td>
<td>Unweighted average tariff of 5.4 percent; trade weighted average tariff of 4.3 percent. 74 percent of all six-digit product lines zero-rated. 21 different tariff bands, with a normal maximum tariff of 50 percent and exceptional maximum tariff of 100 percent (on some alcohol products). Three-tiered tariff structure, with different tariffs applying to (i) countries with free trade agreements, (ii) countries that have been granted MFN status, and (iii) &quot;autonomous&quot; countries. All tariff rates on ad valorem basis, except for sugar, alcohol, and tobacco.</td>
</tr>
</tbody>
</table>
Table 2. Trade and Payments Restrictions (continued)

<table>
<thead>
<tr>
<th>Restrictions</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>quotas</td>
<td>Concessional tariff quotas on imports of agricultural products from the EU; general tariff quotas on unbottled alcoholic beverages and raw materials for their production, raw sugar and half-finished products for sugar factories, technical ethyl alcohol, pure-bred birds’ eggs for incubation, live pure-bred animals (horses, bovine animals, swine, sheep, and goats), live pure-bred poultry (fowls, ducks, geese, turkeys, and quails), other live pure-bred animals (guinea pigs, domestic rabbits, fur skin animals), cereals and combined fodder, and non-standard clear glass bottles. All tariff quotas are allocated by auction.</td>
</tr>
<tr>
<td>bans</td>
<td>None (specific regulations for certain products as mentioned above).</td>
</tr>
<tr>
<td>on payments</td>
<td>None on current account transactions, virtually no restrictions on capital transactions; Article VIII status since April 1994; fixed exchange rate of four litai per one US dollar under currency board arrangement; residents and non-residents may open accounts in foreign currency.</td>
</tr>
</tbody>
</table>

Source: Lithuanian authorities.
average import tariff amounted to 5.4 percent in mid-1995. 1/

The normal maximum rate is 50 percent, while exceptional rates of 70 to 100 percent apply only to a few goods. The highest import tariffs have been levied on footwear, agricultural products, and textiles, while there has been virtually no import protection for machinery, chemicals or metals (Chart 3b). Weighted by the actual import values in 1994, the average import tariff is 4.3 percent. About 85 percent of the total value of goods has entered Lithuania tariff-free (Chart 3c). Some 9 percent of all imports is subject to customs duties of 10 to 20 percent, while tariffs exceeding 30 percent are levied on only 3 percent of total imports. While it is difficult to say to what extent tariff barriers themselves have reduced imports, thus affecting the calculated trade-weighted average tariff, 2/ it is important to note that it has been significantly lower than in several other transition economies (EBRD, 1994). In Bulgaria, Hungary, and Poland, for example, the trade-weighted average tariffs have ranged up to more than 15 percent. However, it has to be taken into account that a wide dispersion of tariffs itself may imply significant welfare losses. This also applies to frequent changes in the tariff structure that create an unstable environment, potentially affecting investment decisions and hence economic growth.

An important reason for the recent reversal in trade policies has been seen in the significant real appreciation of the exchange rate that has led to increased pressure from import competition and hence to greater demands for protection (Sorsa, 1994, p. 164). While initially the nominal exchange rate depreciated more or less in line with the depreciation of the Russian ruble against the US dollar following Lithuania's withdrawal from the ruble area in October 1992, the sharp tightening in monetary policy in mid-1993

1/ Based on the six-digit level of the Commodity Description and Coding system Lithuania adopted in 1992. In cases where different tariffs apply to different countries according to the three-tiered tariff scheme, the highest tariff was taken so that the calculated average may overestimate the extent of trade restrictiveness. However, the extent of overestimation is limited by the fact that most concessional tariffs vis-a-vis countries with free trade agreements or MFN status are subject to tariff quotas, which determine the volume of imports at these concessional rates without limiting the total import volume.

2/ This is an important reason why the weighted (as well as unweighted) tariff bears no necessary relation to the welfare implications of trade policies. Given its theoretical shortcomings, alternative measures have been developed in the literature, for example, by estimating a welfare-equivalent uniform tariff based on partial of general equilibrium models (e.g. Anderson and Neary, 1994). However, the very limited availability of data in many marketizing economies renders such an approach extremely difficult if not impossible.
Chart 3. Level and Dispersion of Import Tariffs, June 1995

(a) Distribution of Product Lines by Tariff Bands (in percent of total)
Chart 3. Level and Dispersion of Import Tariffs, June 1995

(b) Unweighted Average Import Tariffs (in percent)
Chart 3. Level and Dispersion of Import Tariffs, June 1995

(c) Distribution of Import Values by Tariff Bands (in percent of total)

Source: Lithuanian authorities; and IMF staff estimates.
resulted in a substantial nominal appreciation (Chart 4). 1/
Notwithstanding significant foreign exchange market interventions in the second half of 1993 that prevented the dollar exchange rate from appreciating further before the litas was formally pegged to the dollar under a currency board arrangement, the nominal effective exchange rate vis-à-vis FSU countries continued to appreciate rapidly. In fact, between January 1993 and mid-1995, the nominal value of the litas against these currencies increased by more than 1,300 percent. However, with prices rising significantly faster in the FSU during this period, Lithuania's real effective exchange rate vis-à-vis these countries appreciated by only about 20 percent. 2/ In contrast, it appreciated by some 250 percent against industrial countries. As Richards and Tersman (1995) argue, however, this has largely mirrored a significant initial undervaluation and a gradual adjustment of the real exchange rate towards its equilibrium level. 3/

IV. Trade, Competition and Contestable Markets

While exchange rate developments have probably been an important factor why attempts to lobby for more import protection have intensified, the marked increase in the dispersion of tariff barriers suggests that certain interest groups have been particularly influential. As discussed in this section, their political power largely stems from their position in the home market, a legacy of the past.

1. Market concentration and antitrust policies

Under central planning, monopolies were promoted for decades, reflecting a "...naive belief in the existence of economies of scale matched only by college freshmen and Lenin..." (Nordhaus et al., 1991, p.333). The monopoly problem has been regarded as particularly serious in the FSU, where a single enterprise accounted for 75 to 100 percent of total output in more than one-third of (four digit) industries (Table 3). Typically, these enterprises with very high market shares in the FSU markets were all-union enterprises directly controlled by Moscow, whose market shares in the republican markets were even more extreme.

1/ Lithuania's monetary and exchange rate policy is discussed in detail by Hansson and Sachs (1994) and Saavalainen (1995).
2/ The calculations of Lithuania's nominal and real effective exchange rates are based on the approach described in Knöbl (1994, p. 98).
3/ The recent decline in inflation suggests that the adjustment of the real exchange rate towards its equilibrium level is well underway. However, as Richards and Tersman (1995) argue there will be a tendency for continued real appreciation as part of the transition process towards higher income levels, due in part to differential productivity growth rates in the tradable and nontradable sectors.
Chart 4.

Effective Exchange Rates and Relative Prices (1/93-6/95) [Trade Weights]

Sources: IMF, International Financial Statistics, staff reports on Belarus, Lithuania, the Russian Federation, Ukraine, and staff estimates.
1/ Increase implies an appreciation.
2/ Relative price movements of Lithuania's trade partners.
As mentioned before, Lithuania had about 600 all-union enterprises in the pre-reform period. While efforts have been made to break up some of these large conglomerates, competition policy has focussed especially on removing legal barriers to entry for new competitors and regulating enterprises with dominant market power. 1/ In November 1992, a law defining unfair competition and monopoly practices was adopted, which was to be enforced by a newly established Agency for Prices and Competition. In 1994, this agency investigated some 50 cases and based its recommendations on a detailed market structure study covering 88 industry branches (Geralavičius, 1994). According to this study, the degree of concentration has remained very high in several branches. In about 35 percent of all branches, the single largest enterprise had a market share of more than 80 percent; in fact, in about 32 percent of all branches, there has been only one producer.

Table 3. Share of Single Largest Producer in the FSU and in Lithuania, 1988 and 1993

(in percent)

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<tbody>
<tr>
<td>0-50</td>
<td>39.2</td>
<td>0-40</td>
</tr>
<tr>
<td>50-75</td>
<td>24.1</td>
<td>40-80</td>
</tr>
<tr>
<td>75-100</td>
<td>36.6</td>
<td>80-100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>31.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>33.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>35.2</td>
</tr>
</tbody>
</table>

Sources: Peck and Richardson (1991, p. 65); Geralavičius (1994, p. 64).

1/ On the other hand, budget constraints have been hardened only gradually in order to avoid a sharp increase in unemployment. This policy, which has benefitted in particular large enterprises as evidenced by their significant tax and energy arrears, raises barriers to entry for new competitors.
However, even in industries with an extremely high degree of concentration, enterprises may not necessarily be able to abuse their market power. As long as entry and exit are perfectly costless, the mere threat of entry may enforce good conduct by incumbents. In fact, the perfect contestability of a market would preclude excessive profits since the potential entrant could undercut the incumbent's prices to a degree that still leaves an attractive return to the new enterprise (Baumol, Panzar, and Willig, 1988). In practice, however, it can be assumed that entry in the industry requires substantial sunk costs so that in many branches of the economy the pressures of contestability may not be able to protect the interests of consumers against excessive prices.

Under those circumstances, free trade could play an important role. In the absence of trade restrictions, even an industry with a high business concentration and substantial sunk costs as an entry deterrence for domestic competitors may have at its disposal a good many firms for which entry and exit is easy. In turn, a protectionist policy likely undermines the contestability of industries, imposing a burden on the public in addition to the better-known distortions trade barriers typically create (Baumol and Lee, 1994, p.9). This argument seems to be particularly powerful in transition economies, which have little experience in antitrust policies but where many industries are characterized by a high degree of market concentration. While it may be unrealistic to assume that domestic and foreign goods are perfect substitutes, the argument remains valid even if one assumes that goods are sufficiently heterogenous so that domestic firms retain some market power to charge a price that exceeds marginal cost. Under those circumstances, the domestic firms' mark-up is reduced, resulting in lower prices and output of the home goods, with the usual impact on profits and consumer welfare. In addition, the allocative efficiency is improved since prices reflect more closely true costs (Baldwin, 1994, p.38).

However, in representative democracies trade policies usually reflect not only the concerns of the general electorate but also pressures from special interests. Therefore, governments are often assumed to respond to these interests by trading off the support that comes from individual lobbies against the alienation of voters that may result from the implementation of socially costly policies. Trying to explain why certain interest groups are especially successful in capturing private benefits from the political process, Grossman and Helpman (1994) have presented a model,

1/ In this connection, it has also been argued that a high level of concentration is likely to inhibit privatization, first, because the rationalization or closure of a single factory may generate massive resistance from employees and customers, and, second, because private monopolies have a capacity for customer exploitation and discrimination that invites regulation (Filatotchev, Buck, and Wright, 1992, p. 513). In turn, this argument implies that import competition may support the change in the ownership structure and hence the transition to a market economy.
in which the weights that the government places on different groups are derived endogenously. According to this model, equilibrium trade policies are determined by (i) the import demand elasticities, whereby industries with higher elasticities have smaller deviations from free trade; (ii) the political strength of individual lobbies, which in turn is determined by the policy outcome that would emerge if the lobby in question were not represented in the political process; and (iii) parameters describing the country's political economy, such as the degree of discretion the government has to impose trade restrictions.

2. A case study: the food processing industries

The food processing industries appear to be particularly interesting for studying the political economy of trade policy in Lithuania. Out of total industrial output, these industries accounted for almost 40 percent in 1994. With the number of tariff bands in this sector having more than doubled from nine to 21 since the introduction of the new trade law in mid-1993, it enjoys not only one of the highest average import tariffs but also shows the widest dispersion of tariff barriers, which range from 0 to 100 percent. At the same time, it is one of the industries with the highest business concentration. In several branches, total output is produced by fewer than five enterprises, and in some cases the share of the largest enterprise is more than 50 percent. Among the ten largest branches, the fish processing industry is the most dramatic example, where the largest enterprise accounts for a share of 82 percent.

In contrast to what would appear desirable from a welfare point of view, there seems to be a positive correlation between business concentration and import protection in the area of food processing (Chart 5). While the average import tariff is relatively moderate in branches such as milk processing, the vegetables and fruit industries, and the production of bread and animal fodder, it is considerably higher in the confectionery, tobacco and alcohol industries. These industries are especially concentrated and are typically characterized by a relatively low import demand elasticity, which has presumably strengthened their negotiation position in lobbying for higher import protection. At the same time, these efforts have been facilitated by the institutional procedures for changing customs duties, which require merely a simple government decree, following a request from a

1/ While the correlation between import restrictions and measured business concentration is statistically insignificant, in some industries firms are particularly likely to cooperate in their efforts to achieve higher import protection. As explained below, this applies especially to the sugar industry that consists of four producers with almost equal market shares. In the presence of collusion, however, the relative market share of the largest producer employed here may underestimate the true degree of business concentration, which may be an important reason for the relatively weak statistical relationship between the two variables.
Chart 5. Food Processing Industries: Concentration and Import Protection

Source: Lithuanian authorities; and IMF staff estimates.
ministry (Sorsa, 1994, p.163). Given that in numerous food processing enterprises the government has retained a sizeable share so that many of them have remained under the auspices of the Ministry of Agriculture, lobbying has been particularly easy. 1/

This applies in particular to the sugar industry, which has been granted special status under a separate Sugar Law adopted in early 1995. 2/ While three of the four sugar producers are state enterprises, with private shares amounting to less than 20 percent, only one is a joint stock company. Unlike in many other food processing industries, however, these enterprises have nearly the same market share so that a comparison of the share of the largest producer does not adequately reflect the relative degree of market concentration in this industry. In fact, the Lithuanian Agency of Prices and Competition regards the sugar market as one of the least competitive ones of the agricultural markets and has contested the declarations used as a basis for price increases on several occasions. In some cases, the declarations were rejected and one sugar factory was even fined for holding production off the market in what was seen as an attempt to raise local sugar prices. Capacity utilization has been significantly lower than in most other food processing industries, averaging only about 50 percent. At the same time, production costs have been particularly high, extracting sugar mainly from sugar beet. With the processing lines designed on the basis of cheap energy, the Lithuanian sugar enterprises use about one ton of fuel oil per ton of sugar compared with an international average of only 0.32 tons of fuel oil. Given the very high energy intensity and the sharp increase in imported energy prices, energy costs represent almost 13 percent of total production costs, substantially more than the international standard of about 7 percent. Without a very high degree of import protection, it seems highly likely, therefore, that domestic sugar producers would soon be driven out of the market.

A high degree of business concentration and import protection, deterring the entry of potential competitors, may be an important incentive for foreign direct investment. In fact, the two largest foreign investments in Lithuania are in the tobacco and confectionery industries, which consist of two and four enterprises, respectively. In 1993, one of the two tobacco factories was bought by Philipp Morris, an American company. Under the new

1/ In many enterprises, the Government has retained a share of more than 50 percent. In those enterprises, it normally appoints one person from the Ministry of Agriculture to the Board of Supervisors, which in turn appoints the General Manager. In wholly state owned companies, the General Manager is directly appointed by the Ministry.

2/ More recently, the ad valorem import tariff on sugar was reduced from 70 to 35 percent in compliance with Lithuania’s Fund-supported program. However, reflecting strong political pressure from the sugar industry, the specific rate on sugar has remained unchanged. Given the current level of world market prices, the reduction in the ad valorem rate has hardly affected the degree of import protection.
management, the factory has continued to produce only local (formerly all-
union) brands of cigarettes. In this market segment, where Philipp Morris
competes only with low-quality imports from other Central and Eastern
countries, the company has a domestic production share of 100 percent.
Basically the same strategy has been followed by Kraft Jacobs Suchard, an
American-Swiss company that bought one of the four Lithuanian confectionery
factories in 1993 in order to produce primarily local brands of chocolate
bars for the Lithuanian and neighbor markets. Given the importance of these
companies for Lithuania's image as a location for foreign investment, it can
be assumed that they have enjoyed a powerful negotiation position, all the
more as their investments have resulted in positive employment effects.

V. Gaining Access to Western Markets

The frequent changes in the trade regime, which have been accompanied by
a wider dispersion of tariff barriers, also mirror Lithuania's attempts to
redirect foreign trade towards the West. Following the collapse of the
trade, payments, and monetary arrangements with the FSU, which has greatly
exacerbated the monopoly problem, this goal has become a major driving force
for Lithuania's trade policy reform. In early 1995, a three-tiered tariff
structure was introduced, under which different tariffs apply to (i)
countries that have signed free trade agreements with Lithuania; (ii) those
that have been granted MFN status; and (iii) all other "autonomous"
countries.

In aiming at redirecting foreign trade, efforts have intensified to join
the multilateral trading system under the WTO. In October 1992, Lithuania
was granted observer status and soon thereafter, a working party was
established to examine Lithuania's trade policy regime in view of its formal
application. Lithuania's membership in the WTO will involve commitments to
liberalize access in goods and services and make Lithuania subject to an
extensive system of multilateral trading rules and disciplines. While
Lithuania expects significant welfare gains from more liberal foreign trade
in a global context, even more emphasis has been put on regional
integration, in particular into the EU.

1. Regional Integration and the European Union

Lithuania's integration into the EU began in early 1993, when a
cooperation agreement came into force, governing trade, commercial and
economic relations between Lithuania and the EU and providing for mutual MFN
treatment. 1/ This agreement was replaced by a free trade agreement in early 1995. On June 12, 1995, finally, Lithuania signed an Association (Europe) Agreement with the EU, establishing a framework for political dialogue, harmonizing legislation, cooperating on science and technology and providing for technical cooperation.

Encompassing the free trade agreement that was concluded earlier Lithuania's Association Agreement is similar to those concluded between the EU and other Central and Eastern European countries. 2/ As regards trade in industrial products (Articles 9-17), Lithuania benefits from a transitional period of six years within which all remaining customs duties are to be abolished; 3/ in contrast, the EU has opened its markets for most products with immediate effect. While trade in textiles is ruled by specific provisions (Article 16), there is very limited relaxation for agricultural products (Articles 18-21). In addition, there are common provisions governing trade between the two parties (Articles 24-36). These provisions include rules concerning competition and state subsidies, standstill clauses prohibiting the introduction of new trade restrictions, safeguard clauses, anti-dumping provisions, and the definition of the rules of origin. Under exceptional circumstances and under strict conditions, Lithuania may, however, derogate from the standstill clause to protect infant industries and sectors under restructuring. The implementation of these provisions is monitored by an Association Council.

While in the absence of more widespread membership of the WTO the provisions of the Europe Agreements with countries in transition are effectively setting the standard on trade rules for their signatories in Central and Eastern Europe and the Baltics (EBRD, 1994, p. 117), the agreements have widely been criticized for the lack of progress in the liberalization of agricultural trade and for the relatively slower liberalization of EU imports in other sensitive sectors. This applies especially to textiles and footwear, iron and steel, and chemical products. In the view of the EU, these sectors deserve particular protection, because

1/ Mutual MFN agreements have been concluded with most other OECD countries, and some of them have also provided temporary and nonreciprocal duty preferences to Lithuania under their GSP schemes. In addition, mutual MFN agreements have been negotiated with a number of FSU states (i.e., Belarus, Kazakhstan, Russia, Tajikistan, and Ukraine), several former CMEA countries (i.e., Bulgaria, Cuba, Czech Republic, Hungary, Poland, Romania, and Slovak Republic), and some developing countries (i.e., China, India, and the Republic of Korea).

2/ An analysis of these agreements can be found, for example, in Mastropasqua and Rolli (1994), Messerlin (1992), and Winters and Wang (1994).

3/ Until then, concessional import tariff quotas are levied on certain products, whereby a higher tariff rate applies after a specific quantity of the good has entered the country. These tariff quotas—as well as export tariff quotas granted by the EU—are allocated by auction.

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increased competition from transition economies would exacerbate their adjustment problems and could result in a marked increase in unemployment concentrated in certain regions of the Community. 1/

As in the case of other transition economies that have concluded Europe Agreements, Lithuania's exports of textiles are subject to restrictions until the end of 1997. 2/ Until then, import tariff quotas apply. For imports in excess of these annual ceilings, the Community may re-establish customs duties at any time (Annex VI of the Agreement). While trade in textiles will thus be liberalized significantly later than trade in industrial products, it should be noted that the removal of these restrictions will take place significantly sooner than the corresponding dates set in the Uruguay Round Agreements.

Although the slower liberalization of trade in some sensitive areas may adversely affect the growth and redirection of trade in Central and Eastern Europe, the most restrictive aspect of the Europe Agreements is generally seen in the contingent protection they embody (e.g., Hindley, 1992; Faini and Portes, 1994). This form of protection may undermine the liberalization of directly legislated protection measures such as tariffs, quantitative restrictions, and other nontariff barriers. Apart from antidumping provisions, the general safeguard clause in the Europe Agreements appears particularly restrictive—despite the fact that there has been little recourse to these instruments so far. 3/ The mere threat to apply these instruments may have a 'chilling effect' on exports from existing producers and on new investment.

A particular problem is seen in the vagueness of the general safeguard clause (Articles 30/31), according to which the contracting parties may take 'appropriate measures' if imports cause or threaten to cause (i) "serious injury to domestic producers of like or directly competitive products..."; or (ii) "serious disturbances in any sector of the economy or difficulties which could bring about serious deterioration in the economic situation of a region" (italics added). In contrast to GATT/WTO rules, there is no reference to 'unforeseen developments' as a condition for invoking the clause, which leaves even greater latitude in its application. Finally, an important drawback of the Europe Agreements is also seen in the hub-and-spoke bilateralism implicit in the stipulated rules of origin (EBRD, 1994,

1/ However, Rollo and Smith (1993) studied the potential effects of increased imports in these sensitive areas and concluded that "(n)o rational economic explanation for the EC's sensitivity with respect to trade with Eastern Europe emerges." As Neven (1994) suggests, the identification of sensitive sectors rather seems to reflect successful lobbying of powerful interest groups within the EU.

2/ Article 19 of Protocol 1 referred to in Article 16 of the Europe Agreement.

3/ Currently, there is one antidumping case pending against a Lithuanian exporter of fertilizers. This case has been initiated by a British company.
p.118). By setting a high local content requirement without permitting cumulation of local content between Lithuania and other trading partners, the Europe Agreement effectively discourages economic integration among third countries. 1/

2. Regional Integration, EFTA and the Baltic free trade agreement

The problem of hub-and-spoke bilateralism also concerns Lithuania's free trade agreements with a number of EFTA countries, 2/ which are confined to industrial products. While in the context of a multilateral agreement all product components originating in any of the participating countries would be considered as originating from Lithuania, the rules of origin under the current bilateral agreements require that a Lithuanian product has to undergo sufficient processing in Lithuania itself or in the partner country (each of the EFTA countries taken separately) to qualify for duty free entry. At the same time, an EFTA country exporting goods to another EFTA country would not enjoy tariff-free market access for inputs originating in Lithuania.

These shortcomings have been recognized both by the Lithuanian authorities and their EFTA partners, which have recently suggested to place the bilateral agreement in a multilateral context. This proposal, which has also included Latvia and Estonia, has generally been viewed as an attempt to revitalize EFTA after Austria, Finland, and Sweden decided to leave the Association and join the EU. Multilateral free trade talks are expected to commence in late 1995. These negotiations are expected to be facilitated by the existence of a trilateral free trade agreement among the Baltic countries that came into force in April 1994. In fact, it foresees the cumulation of rules of origin, which enables the transit of goods to the EFTA countries without tariffs. It also includes provisions concerning customs cooperation, competition, and state monopolies.

Notwithstanding its potential importance for multilateral free trade talks with EFTA countries, 3/ the significance of the Baltic free trade agreement

1/ Apart from their allocation efficiency effects, rules of origin impose substantial administrative costs on exporters and importers, resulting in an artificial distortion of trade (e.g., Baldwin, 1994, pp. 33-36).
2/ Following an EFTA Declaration on Cooperation in December 1991, bilateral free trade agreements were concluded with Sweden (August 1992), Finland (January 1993), Switzerland (April 1993), and Norway (August 1993). Since the beginning of 1995, when Sweden and Finland joined the EU, trade with these two countries has been governed by Lithuania's free trade agreement with the EU.
3/ At the same time, the Baltic free trade agreement has been hailed as a major step towards Baltic integration into the EU, which has preferred the Baltic countries "to speak with one voice". On the political aspects of Baltic integration, see, for example, Stålvant (1993).
agreement for intra-Baltic trade flows appears rather limited. In fact, it eliminates barriers to trade only for industrial goods falling within Chapters 25 to 97 of the Harmonized Commodity Description and Coding System. The agreement includes, however, safeguard clauses, permitting the contracting parties to impose temporary import tariffs of up to 25 percent if imports seriously threaten domestic producers. Also, the contracting parties are, at least for an initial period, allowed to retain export barriers on raw materials, encouraging domestic industries to use local materials and directing the development of local processing industries. 1/

Finally, trade in agricultural products is not covered by the trilateral agreement and will be subject to future negotiations.

3. Constraints on redirecting foreign trade

Notwithstanding Lithuania's important integration efforts, the redirection of trade continues to be hampered—at least in the short run—by technical and logistical constraints. This applies especially to trade in energy, an area where under Soviet planning Lithuania had been assigned the role of a major supplier for other republics. As far as electricity is concerned, exports are currently restricted by the existing distribution grid. Lithuania's total installed capacity exceeds 5,400 megawatts, which includes nuclear power, fossil fuel, hydro stations, and a pumped hydro plant. As part of the Northwest Interconnected Power System of the FSU, Lithuania exported more than 50 percent of its electricity production to Belarus, Latvia, and Kaliningrad, amounting to about 12 TWh (net) per year in the late 1980s. 2/ Valued at world market prices, this would have implied export revenues of US$600-650 million per year. Following the dissolution of the FSU, Lithuania has become part of the Baltic network, which remains interconnected with the Russian power network. While Kaliningrad is now largely supplied by Russia via the Baltic 330 kV network, domestic demand as well as exports to Latvia and Belarus have fallen dramatically which has resulted in large excess capacity. With significantly lower production costs, electricity is almost entirely

1/ Under these provisions, Latvia has retained export tariffs on gypsum, limestone, raw hides, scrap metals, non-ferrous metals, and unprocessed timber, ranging from 10 to 100 percent. While Lithuania has retained export tariffs on dried animal organs, raw hides an unprocessed timber of up to 50 percent, Estonia may limit its exports of oil shale, gravel, clay and quartz sand through the establishment of quotas.

2/ In fact, Lithuania was the fourth largest energy exporter in the world, after France, Norway, and Russia.
generated by the Ignalina nuclear power plant, 1/ while most other power plants run at a capacity of less than 20 percent.

To connect Lithuania with the Polish distribution grid would require significant investments of up to US$100 million, since the Polish system operates on 400 kV requiring either transformation or an AC/DC conversion station. Nevertheless, preliminary feasibility studies suggest that the installation of a transmission line would make economic sense as it would allow interchanges with the large Polish system. While Poland's import demand for electricity is expected to increase considerably after the year 2000, its distribution grid has the additional advantage of being connected with Western Europe. 2/ Thus, Lithuania could get access to the large European electricity market while obviating the need to wheel power through Belarus (World Bank, 1993, p. 172). In fact, with production costs of less than 1 1/2 US cents per kwh generated by nuclear power and about 3 US cents per kwh for conventionally generated electricity, Lithuania would appear highly competitive.

According to the European Energy Charter, which was also signed by Lithuania, trade in energy between the contracting parties, including transit, is generally governed by rules under the GATT/WTO (Article IV "Non-Derogation from GATT and Related Instruments"). Transitional provisions apply to signatories, who are not members of the WTO. According to Article 29 (2b), trade with countries that were a constituent part of the FSU, may instead be governed by bilateral or multilateral agreements between the contracting parties until December 1, 1999 or until the country becomes a member of the WTO, whichever is earlier. However, non-conformities with the provisions of the GATT/WTO and Related Instruments are to be strictly limited, and every effort is to be made by other WTO members take remedial action in light of representations of other parties of the Charter (Annex TFU of the Charter).

While the European Energy Charter facilitates access to Western markets, 3/ estimates of Lithuania's potential supply capacities are clouded by a number of uncertainties. First of all, it is not clear how long Ignalina would remain on stream. Provided that Lithuania remains committed not to replace

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1/ Its two RMBK reactors have a maximum capacity of 1,500 megawatts, making Ignalina the largest nuclear power plant in the world. However, because of limited domestic and foreign demand for electricity, the reactors have recently operated at a level of 750 megawatts only, which from a safety point of view is considered to be the minimum.

2/ In the future, this might also include Sweden, which has recently initiated talks with Poland on a possible undersea transmission line between the two countries.

3/ The aim to intensify trade in energy is also emphasized in Article 81 of Lithuania's Europe Agreement.
the nuclear fuel channels ("retubing"), 1/ which have a life expectancy of some 20 years, unit 1 would probably be shut off before the end of this decade. Unit 2 would continue to operate until 2005-2007. Second, Lithuania's export capacity also depends on the future domestic demand for electricity. While ceteris paribus domestic demand can be expected to increase considerably over the next few years reflecting Lithuania's economic recovery, this increase might be dampened by a more efficient use of energy. In fact, various efficiency-increasing measures are already underway or envisaged under an Energy Sector loan from the World Bank and technical assistance projects sponsored by EU Phare and bilateral donors. These measures have also included a gradual increase in electricity tariffs to cost-covering levels. Finally, Lithuania's export capacity would be affected by the rehabilitation of existing facilities and investments in new ones, which, however, appear relatively risky in light of Lithuania's dependence on primary energy supplies from Russia. To reduce this dependency, a three-year trial contract has recently been concluded with Venezuela on fuel imports of 25 to 30 thousand tons per year for Lithuania's conventional power stations.

Under the assumption that Ignalina remains on stream as outlined above, Lithuania's export potential is estimated at about 6 TWh over the medium term. In the longer run, with only unit 2 of Ignalina operating, this potential would be reduced to about 4 TWh. Assuming that investments would be confined to the rehabilitation of existing facilities, it would be further reduced to 2 TWh when Ignalina's unit 2 is decommissioned. 2/ Under this scenario, revenues from electricity exports could initially amount to about US$350 million per year but would then gradually decline to less than US$150 million, depending on long-term developments in electricity prices.

Technical and logistical constraints also apply to trade in oil, potentially an important area for Lithuania that possesses the only oil refinery in the Baltics. With a maximum capacity of almost 13 million tons per year, substantial amounts of refined products used to be exported to the rest of the FSU. However, in recent years, its capacity utilization has not exceeded 30 percent. Partly, this low degree of utilization has reflected a sharp decline in demand due to the collapse of output both in Lithuania and its neighbor countries. More importantly, however, it has mirrored highly erratic deliveries of crude from Russia via pipeline that have frequently caused disruptions in the refinement process. To reduce this dependency, the construction of an oil terminal in Butingé near Klaipeda has begun, from

1/ This commitment has been made as part of a technical assistance project to upgrade Ignalina's safety standards sponsored under the nuclear safety account of the EBRD and by bilateral donors.

2/ On these assumptions, see the Final Report of the Lithuanian Energy Institute on the National Energy Strategy (Volume I: the Strategy), which was drafted in collaboration with IC Consult, ERM Energy Limited, and COWIconsult under the EU Phare Program.
which crude oil will be transported to the refinery in Mazeikai. The total
investment costs are estimated at close to US$200 million. While Mazeikai's
input problems may thus be solved over the medium term, it is uncertain
whether its refined products will be easily marketable in the West. In
fact, Mazeikai has started only recently to produce high octane unleaded
gasoline, with gasoline with 76 and 92 octanes representing the major share
of its production. Moreover, there seems to be significant excess capacity
in Western Europe so that a number of firms have already closed or sold
their refineries (The Economist, July 15, 1995, p. 55).

VI. The Openness of the Economy and the Redirection of Trade

1. The quality of trade statistics

Before reviewing the empirical evidence, a cautionary note on the
quality of trade statistics seems warranted. While under central planning
trade data had been collected directly from the small number of state
trading organizations, the demonopolization of foreign trade meant that the
share of trade transactions captured by official statistics rapidly
diminished. Therefore, new modes of data collection were introduced, and
since 1993 data on trade flows have been based on information provided by
the customs authorities. While important efforts have been made to improve
the quality of trade statistics, such as the computerization of customs, a
comparison with data reported by Lithuania's main OECD trading partner
countries suggest that trade flows are significantly underreported
(Table 4). This seems to apply in particular to the export side, where in
the case of the United Kingdom, for example, the discrepancy in 1994
amounted to more than 400 percent. On the import side, the discrepancies
appear less extreme, but here too Lithuanian data generally show smaller
trade flows than reported by Lithuania's trading partner countries. In
fact, similar statistical discrepancies have been observed in a number of
other transition economies, where various factors such as transit trade, the
slow processing of trade documents, smuggling and under invoicing have been
blamed (e.g. Rodrik, 1994). As Sorsa (1994, p. 161) argues, (legal as well
as illegal) transit trade in raw materials, especially oil and metals, is
likely to have played a particularly important role in the case of
Lithuania, where national statistics reported exports to the OECD area of
only US$4 million in 1992 compared with UN statistics reporting imports from
Lithuania of US$418 million. Presumably, this trade has reflected a
significant gap between prices of raw materials in Russia and world market
prices; however, with domestic prices in Russia rapidly approaching world
market levels, this factor should have become less important in the more
recent past.
Table 4. Comparisons of Home and Partner Country Trade Statistics

(in millions of US dollars)

<table>
<thead>
<tr>
<th>Trading Partner</th>
<th>1993</th>
<th></th>
<th>1994</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>UN Data</td>
<td>Lithuanian Data</td>
<td>UN Data</td>
<td>Lithuanian Data</td>
</tr>
<tr>
<td>Belgium</td>
<td>50.1</td>
<td>13.7</td>
<td>85.1</td>
<td>15.7</td>
</tr>
<tr>
<td>Denmark</td>
<td>44.9</td>
<td>30.3</td>
<td>74.5</td>
<td>35.1</td>
</tr>
<tr>
<td>Finland</td>
<td>13.9</td>
<td>17.6</td>
<td>24.7</td>
<td>19.4</td>
</tr>
<tr>
<td>France</td>
<td>63.0</td>
<td>16.8</td>
<td>35.9</td>
<td>24.0</td>
</tr>
<tr>
<td>Germany</td>
<td>194.1</td>
<td>137.7</td>
<td>260.5</td>
<td>231.6</td>
</tr>
<tr>
<td>Italy</td>
<td>23.0</td>
<td>43.7</td>
<td>n.a.</td>
<td>38.2</td>
</tr>
<tr>
<td>Japan</td>
<td>36.7</td>
<td>0.7</td>
<td>n.a.</td>
<td>2.9</td>
</tr>
<tr>
<td>Netherlands</td>
<td>147.7</td>
<td>56.7</td>
<td>156.1</td>
<td>105.8</td>
</tr>
<tr>
<td>Spain</td>
<td>56.8</td>
<td>8.4</td>
<td>38.8</td>
<td>17.8</td>
</tr>
<tr>
<td>Sweden</td>
<td>51.9</td>
<td>35.5</td>
<td>82.3</td>
<td>62.9</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>232.0</td>
<td>31.7</td>
<td>235.6</td>
<td>46.7</td>
</tr>
<tr>
<td>United States</td>
<td>18.4</td>
<td>5.2</td>
<td>17.5</td>
<td>12.9</td>
</tr>
</tbody>
</table>

Exports to

Imports from

2. Size of trade and susceptibility to external shocks

Additional statistical problems arise when one compares trade flows in the pre-reform and transition periods. To a considerable extent, the dramatic changes in trade flows that have seemingly taken place over the past few years may be explained by "setting the statistical record straight" (Brada, 1994, p. 605). Since intra-FSU prices were generally unrealistic and since the ruble was substantially overvalued vis-à-vis the US dollar, recorded trade flows are likely to overstate considerably the true magnitude of the decline in trade with the FSU. At the same time, they are likely to overstate the sharp increase in the relative share of trade with the rest of the world, which according to official statistics rose from about 5 percent in 1991 to almost 50 percent in 1992 (Table 5).

Notwithstanding these statistical uncertainties, the degree of openness of the Lithuanian economy seems to have decreased considerably in the early stages of its transformation process (Table 6). While the export ratio nearly halved since 1992, imports fell by about one third in terms of GDP. 1/

In turn, non-tradable activities appear to have gained significantly in importance. This does not seem very surprising, taking into account that the trade shock has hit primarily Lithuania's tradable sector. However, it also reflects a rapid expansion of the services sector, where barriers to entry have been relatively low. In fact, this sector has absorbed a large share of workers laid off by industrial enterprises resulting in considerable productivity gains in the tradable goods sector (Cornelius, 1995).

The structural shift towards nontradable activities seems to have been accompanied by an increase in the diversification of foreign trade, both with regard to its geographic distribution and its commodity composition (Table 7). This would suggest that the Lithuanian economy has become less susceptible to external shocks. Measured by the Gini-Hirschman coefficient, whose upper bound is unity, the concentration of Lithuania's exports seems to have declined significantly compared with the pre-reform period, both with respect to the composition of exports and their geographic distribution. While on the import side the geographic concentration has also decreased considerably, the degree of commodity concentration has

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1/ As long as the relative price between outputs of the tradable and nontradable sectors does not change, it makes no difference whether these ratios are measured in current or constant prices. Otherwise, however, changes in trade ratios may conceivably lead to different implications, both with regard to the extent and the direction of change (Michaely, 1984, p.19). In fact, consumer prices that include a significant part of nontradables have risen considerably faster than producer prices. Deflating exports and imports by the producer price index and output with the consumer price index, the measured degree of openness would be considerably higher, with the trade-to-GDP ratio amounting to about 85 percent.
Table 5. Lithuania: External Trade 1991-94

(in millions of US dollars and percent) a/

<table>
<thead>
<tr>
<th></th>
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<th></th>
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</thead>
<tbody>
<tr>
<td><strong>Value</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total exports</td>
<td>6,786</td>
<td>1,142</td>
<td>1,698</td>
<td>2,019</td>
</tr>
<tr>
<td>FSU b/</td>
<td>6,441</td>
<td>585</td>
<td>982</td>
<td>1,165</td>
</tr>
<tr>
<td>rest of world</td>
<td>345</td>
<td>557</td>
<td>716</td>
<td>854</td>
</tr>
<tr>
<td>Total imports</td>
<td>4,938</td>
<td>1,041</td>
<td>1,992</td>
<td>2,339</td>
</tr>
<tr>
<td>FSU b/</td>
<td>4,463</td>
<td>699</td>
<td>1,472</td>
<td>1,276</td>
</tr>
<tr>
<td>rest of world</td>
<td>475</td>
<td>342</td>
<td>520</td>
<td>1,063</td>
</tr>
<tr>
<td>Trade balance</td>
<td>1,848</td>
<td>101</td>
<td>-294</td>
<td>-320</td>
</tr>
<tr>
<td>FSU b/</td>
<td>1,978</td>
<td>-114</td>
<td>-490</td>
<td>-111</td>
</tr>
<tr>
<td>rest of world</td>
<td>-130</td>
<td>215</td>
<td>196</td>
<td>-209</td>
</tr>
</tbody>
</table>

**Percentage distribution**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total exports</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>FSU b/</td>
<td>94.9</td>
<td>51.2</td>
<td>57.8</td>
<td>57.8</td>
</tr>
<tr>
<td>rest of world</td>
<td>5.1</td>
<td>48.8</td>
<td>42.2</td>
<td>42.4</td>
</tr>
<tr>
<td>Total imports</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>FSU b/</td>
<td>90.4</td>
<td>67.2</td>
<td>73.9</td>
<td>54.5</td>
</tr>
<tr>
<td>rest of world</td>
<td>9.6</td>
<td>32.8</td>
<td>26.1</td>
<td>45.5</td>
</tr>
</tbody>
</table>

Source: Lithuanian Department of Statistics.

a/ Figures for trade with countries of the FSU in 1991 converted in U.S. dollars using commercial exchange rate; for other years, conversion based on annual average exchange rates.
b/ Including Estonia and Latvia.
somewhat risen. 1/ This is largely due to the high degree of energy intensity of many industries and Lithuania's dependence on energy supplies from Russia. In fact, the degree of import concentration appears to be considerably higher than in most other countries with similar per capita incomes, concerning both the degree of geographic and commodity concentration (Michaely, 1984, Table 4.1 and 4.2). In contrast, the degree of export concentration is relatively low by international standards, which seems to suggest that Lithuania has been quite successful in redirecting foreign trade and penetrating new markets, despite its continued dependence on critical imports from its traditional trading partner countries, namely Russia.

Table 6. Lithuania: The Openess of the Economy

<table>
<thead>
<tr>
<th></th>
<th>1990</th>
<th>1992</th>
<th>1994</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exports-to-GDP ratio</td>
<td>52.6</td>
<td>61.9</td>
<td>32.1</td>
</tr>
<tr>
<td>Imports-to-GDP ratio</td>
<td>61.2</td>
<td>56.4</td>
<td>37.5</td>
</tr>
<tr>
<td>Trade-to-GDP ratio</td>
<td>113.8</td>
<td>118.3</td>
<td>69.6</td>
</tr>
</tbody>
</table>

Source: The World Bank (1993), and IMF staff calculations.

1/ To some extent, these estimates are affected by the reclassification of product groups in Lithuania's trade statistics. However, estimates based on the old classification scheme are not materially different from the estimates presented in Table 7.
Table 7. Lithuania: Gini-Hirschman Coefficients of Trade Concentration (in percent)

<table>
<thead>
<tr>
<th></th>
<th>1991</th>
<th></th>
<th>1994</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Geographic</td>
<td>Commodity</td>
<td>Geographic</td>
<td>Commodity</td>
</tr>
<tr>
<td>Exports</td>
<td>59.0</td>
<td>46.2</td>
<td>34.3</td>
<td>31.6</td>
</tr>
<tr>
<td>Imports</td>
<td>52.3</td>
<td>36.8</td>
<td>43.0</td>
<td>40.1</td>
</tr>
</tbody>
</table>

Source: Lithuanian authorities; and IMF staff estimates.

3. How much trade reorientation has taken place?

The geographic diversification reflects an intensification of trade especially with the EU (Chart 6). While the share of exports to this region increased from about 3 percent in 1991 to almost 30 percent in 1994, the share of imports from the EU increased by even more during this period, i.e. by 29 percentage points. Thus, the EU has become Lithuania’s second most important trading partner. Although trade with other industrial countries has also increased, their share has remained relatively small. While exports to, and imports from, EFTA countries have accounted for 5.3 and 7.8 percent, respectively, in 1994, 1/ the total export and import shares of the United States and Japan amounted to only 0.7 and 2.2 percent, respectively. In contrast, there has been a sizeable expansion of trade with former CMEA countries, which as suppliers of imports have become more important than Lithuania’s Baltic neighbors.

These developments seem to be more or less in line with earlier studies that—for the FSU as a whole—predicted a substantial reorientation of foreign trade towards the West and in particular the EU. Collins and Rodrick (1991, Table A8), for example, who based their predictions on the experience of comparator countries as well as evidence from the pre-World War II period, estimated that trade with the EU could more than double. With a predicted sharp fall in trade with the former CMEA countries, their results suggested that the EU could become by far the FSU’s largest trading

1/ Including Austria, Finland, and Sweden, which joined the EU in 1995.
(Changes in percentage points)

Source: Lithuanian Department of Statistics; and IMF staff estimates

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partner, accounting for more than 50 percent of its total foreign trade. A somewhat lower concentration on the EU was predicted by Hamilton and Walters (1992), who employed a gravity model describing bilateral trade flows in terms of supply factors in the origin, demand factors in the destination and various stimulating or restraining factors relating to the specific flow. At the same time, they predicted a relatively more pronounced expansion of trade with other industrial countries. A similar gravity model was finally used by Kristoffersson and Wesslau (1995), who, however, focussed exclusively on the Baltic states. Their results also predicted a major redirection of foreign trade for all three countries, especially in favor of the EU and EFTA. 1/

Among Lithuania’s trading partners in the EU, trade with Germany has developed particularly rapidly (Table 8). While in 1991 imports from Germany accounted for only 1.2 percent of Lithuania’s total imports, it amounted to almost 14 percent in 1994. A similar increase has taken place on the export side, making Germany the second most important trading partner after Russia. Significant increases have also been reported for the Netherlands, Sweden, Italy, and Denmark, whose total import and export shares rose to more than 10 percent. Although trade with Ukraine and Belarus has declined substantially, they have retained relatively large shares in Lithuania’s exports and imports.

The geographic redirection of trade has been accompanied by a significant change in the composition of exports and imports. In line with studies that found comparative disadvantages especially in the area of agriculture and food processing, 2/ the share of these goods in total

---

1/ However, as Kristoffersson and Wesslau (1995) emphasize, gravity models are very sensitive to the underlying assumptions on economic developments, particularly with regard to income levels in the home and trading partner countries. As their sensitivity analysis suggests, the redirection of foreign trade from the FSU to the West would likely be significantly smaller if GDP in the FSU grew faster than assumed in their baseline scenario. In fact, in a number of countries of the FSU, including Russia, considerable progress has recently been made in reducing inflation as a precondition for sustained economic growth.

2/ For the FSU as a whole, see, for example, Collins and Rodrick (1991, Table 2.8), Padoan and Pericoli (1993), and Neven (1994). In contrast to these studies, Senik-Leygonie and Hughes (1992) focused on individual industries in individual republics of the FSU, estimating short-, medium- and long-term shadow profit rates. With shadow prices for capital and labor set at zero, they found that only 12 percent of total Lithuanian tradeable output valued at world market prices was produced at a negative shadow profit rate. However, with shadow prices set at positive values in the longer run, taking into account investments required to maintain output, this ratio increased to almost 70 percent. Particularly large negative values were estimated for food processing and agriculture.

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Table 8. Lithuania: Main Foreign Trading Partners, 1991 – 1994
(in millions of US dollars and percent)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>6786</td>
<td>2019</td>
<td>4938</td>
<td>2339</td>
<td>1848</td>
<td>-320</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Russia</td>
<td>3837</td>
<td>570</td>
<td>2461</td>
<td>918</td>
<td>1377</td>
<td>-348</td>
<td>56.5</td>
<td>28.2</td>
<td>49.6</td>
<td>39.3</td>
<td>53.7</td>
<td>34.1</td>
</tr>
<tr>
<td>Germany</td>
<td>37</td>
<td>232</td>
<td>60</td>
<td>322</td>
<td>-22</td>
<td>-90</td>
<td>0.6</td>
<td>11.5</td>
<td>1.2</td>
<td>13.8</td>
<td>0.8</td>
<td>12.7</td>
</tr>
<tr>
<td>Ukraine</td>
<td>774</td>
<td>124</td>
<td>518</td>
<td>117</td>
<td>256</td>
<td>7</td>
<td>11.4</td>
<td>6.1</td>
<td>10.4</td>
<td>5.0</td>
<td>11.0</td>
<td>5.5</td>
</tr>
<tr>
<td>Latvia</td>
<td>456</td>
<td>171</td>
<td>232</td>
<td>64</td>
<td>225</td>
<td>107</td>
<td>6.7</td>
<td>8.4</td>
<td>4.7</td>
<td>2.7</td>
<td>5.9</td>
<td>5.4</td>
</tr>
<tr>
<td>Belarus</td>
<td>565</td>
<td>132</td>
<td>417</td>
<td>89</td>
<td>148</td>
<td>43</td>
<td>8.3</td>
<td>6.6</td>
<td>8.4</td>
<td>3.8</td>
<td>8.4</td>
<td>5.1</td>
</tr>
<tr>
<td>Poland</td>
<td>47</td>
<td>101</td>
<td>72</td>
<td>94</td>
<td>-25</td>
<td>7</td>
<td>0.7</td>
<td>5.0</td>
<td>1.4</td>
<td>4.0</td>
<td>1.0</td>
<td>4.5</td>
</tr>
<tr>
<td>Netherlands</td>
<td>4</td>
<td>106</td>
<td>16</td>
<td>63</td>
<td>-12</td>
<td>42</td>
<td>0.1</td>
<td>5.2</td>
<td>0.3</td>
<td>2.7</td>
<td>0.2</td>
<td>3.9</td>
</tr>
<tr>
<td>Sweden</td>
<td>18</td>
<td>63</td>
<td>2</td>
<td>56</td>
<td>16</td>
<td>7</td>
<td>0.3</td>
<td>3.1</td>
<td>0.0</td>
<td>2.3</td>
<td>0.2</td>
<td>2.7</td>
</tr>
<tr>
<td>Italy</td>
<td>20</td>
<td>38</td>
<td>6</td>
<td>64</td>
<td>15</td>
<td>-26</td>
<td>0.3</td>
<td>1.9</td>
<td>0.1</td>
<td>2.7</td>
<td>0.2</td>
<td>2.4</td>
</tr>
<tr>
<td>Denmark</td>
<td>21</td>
<td>35</td>
<td>1</td>
<td>61</td>
<td>20</td>
<td>-26</td>
<td>0.3</td>
<td>1.7</td>
<td>0.0</td>
<td>2.6</td>
<td>0.2</td>
<td>2.2</td>
</tr>
<tr>
<td>Estonia</td>
<td>156</td>
<td>51</td>
<td>87</td>
<td>38</td>
<td>70</td>
<td>14</td>
<td>2.3</td>
<td>2.6</td>
<td>1.8</td>
<td>1.6</td>
<td>2.1</td>
<td>2.0</td>
</tr>
<tr>
<td>Finland</td>
<td>18</td>
<td>19</td>
<td>3</td>
<td>68</td>
<td>14</td>
<td>-49</td>
<td>0.3</td>
<td>0.9</td>
<td>0.1</td>
<td>2.9</td>
<td>0.2</td>
<td>2.0</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>24</td>
<td>47</td>
<td>5</td>
<td>33</td>
<td>19</td>
<td>14</td>
<td>0.4</td>
<td>2.3</td>
<td>0.1</td>
<td>1.4</td>
<td>0.2</td>
<td>1.8</td>
</tr>
<tr>
<td>USA</td>
<td>2</td>
<td>13</td>
<td>73</td>
<td>46</td>
<td>-71</td>
<td>-34</td>
<td>0.0</td>
<td>0.6</td>
<td>1.5</td>
<td>2.0</td>
<td>0.6</td>
<td>1.4</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>147</td>
<td>42</td>
<td>132</td>
<td>15</td>
<td>15</td>
<td>27</td>
<td>2.2</td>
<td>2.1</td>
<td>2.7</td>
<td>0.6</td>
<td>2.4</td>
<td>1.3</td>
</tr>
<tr>
<td>Other countries</td>
<td>659</td>
<td>275</td>
<td>876</td>
<td>291</td>
<td>-217</td>
<td>-16</td>
<td>9.7</td>
<td>13.6</td>
<td>17.7</td>
<td>12.5</td>
<td>13.0</td>
<td>13.0</td>
</tr>
</tbody>
</table>

Source: Lithuanian Department of Statistics
exports decreased significantly (Chart 7). Considerable declines have also
been reported for machinery and equipments as well as textiles,
footwear, and leather. In contrast, exports of chemicals, plastics, wood,
metals and fossil energy has become relatively more important. However, as
far as the latter are concerned, this has been largely due to price
adjustments. The move to world market prices also explains the substantial
increase in the share of oil and gas in Lithuania’s total imports, despite a
reduction in the volume of imports of these goods by some 70 percent.
Reflecting Lithuania’s growing investment needs, imports of capital goods
have also gained in relative importance. While the share of imports of some
raw materials and construction materials increased moderately, the share of
all other imports declined in 1991-94.

While our analysis suggests that trade has already been redirected on a
large scale, it does not really tell us to what extent enterprises have been
able to shift sales from traditional markets in the FSU to Western markets.
Observing similar trends in Hungary, Poland, and former Czechoslovakia,
Rodrik (1994), for example, emphasizes, that these outcomes are also
consistent with sharp reductions in the kinds of products exported to the
East and sharp increases in products exported to the West, with no real
reorientation of trade. To examine whether this has been the case, Rodrik
calculates an index of similarity of trade with the ruble and nonruble area,
arguing that if economies in transition had been successful in redirecting
their Eastern exports to the West one could have expected a
convergence in the product composition of exports to the two areas. More
specifically, he proposes the following index that takes values between zero
(completely dissimilar product composition) and one (identical product
composition):

\[ I = \sum (\sigma^e_i - \sigma^w_i)^2 \]

with \( \sigma \) denoting shares of product categories in exports, \( i \) indexing product
categories, and \( e \) and \( w \) standing for East (FSU) and West (rest of the
world), respectively.

While the change in the grouping of commodities in the official
statistics makes it difficult to compare the similarity of Lithuania’s
exports to the FSU and the rest of the world over time, the relatively high
value of 0.822 calculated for 1994 suggests that Lithuania’s enterprises
(in percentage points)

Exports

- Textiles, footwear, leather, furskins
- Agriculture prod.; processed foodstuffs
- Electricity
- Machinery, equipments, vehicles, and etc.
- Building materials; ceramics; glass
- Wood, pulp, paper, and articles thereof
- Coal, peat, and other fuel
- Ferrous and non-ferrous metals
- Chemicals, plastics, rubber
- Oil and gas

Imports

- Agriculture prod.; processed foodstuffs
- Chemicals, plastics, rubber
- Wood, pulp, paper, and articles thereof
- Coal, peat, and other fuel
- Building materials; ceramics; glass
- Electricity
- Oil and gas
- Ferrous and non-ferrous metals
- Textiles, footwear, leather, furskins
- Machinery, equipments, vehicles, and etc.

Source: Lithuanian Department of Statistics; and IMF staff estimates
have indeed been quite successful in penetrating new markets. 1/ As Table 9 shows, almost equal export shares have been recorded for vegetable products, mineral products, pulp of wood, paper and paperboard, and vehicles and other transport equipment. As far as machinery, durable consumer goods, animal and vegetable fats and prepared foodstuffs are concerned, however, countries of the FSU have remained Lithuania's dominant export markets. To a somewhat lesser extent, this also applies to footwear, building materials, and optical, photographic and medical instruments. While in these areas a considerable share of products appear unmarketable in the West, the extent of redirecting exports has been particularly large in the areas of chemical products, plastics, and rubber, wood and wood products as well as textiles. 2/

On the import side, the extent of trade reorientation seems to have been even larger. The relatively high overall share of the FSU in Lithuania's imports appears to be largely explained by trade in oil and natural gas, which in value terms represents a very high percentage of Lithuania's import bill. In fact, for nonenergy imports, the share of FSU countries has declined to less than 20 percent in 1994. To a large extent, this reflects a shift to the West particularly in the area of investment goods and durable consumer products but also prepared foodstuffs, textiles, and footwear. However, in value terms, these goods have been relatively less important so that the overall share of non-FSU countries (including the Baltics) in Lithuania's imports has remained slightly less than the share of Lithuania's traditional suppliers.

VI. Conclusions

With an economic structure inherited from the FSU that was fully incorporated into the planning process of the FSU, the reintegration into the world economy has been viewed as essential for the reallocation of resources and Lithuania's transition to a market economy. Substantial efforts have therefore been made to open up the economy and redirect foreign trade. These efforts have entailed a wide range of policy measures, with trade policy reform assigned a key role. Reviewing the empirical evidence in the initial stages of the transformation process, the following preliminary conclusions may be drawn:

1/ This estimate is based on 21 main commodity groups according to the harmonized system classification. Before the introduction of this classification scheme, Lithuania's trade statistics followed the old Soviet scheme encompassing 14 commodity groups. Based on this scheme, an index of 0.562 was calculated. While this would suggest that the commodity composition of exports to the FSU and the rest of the world has become more similar, such a comparison should be regarded with considerable caution.

2/ Similarly, very high export shares have been reported for precious and semiprecious stones, precious metals, and base metals. However, as discussed above, there is reason to assume that these exports largely represent transit trade.
Table 9. Lithuania: Commodity Composition of Foreign Trade by Country Groups, 1994
(in percent)

<table>
<thead>
<tr>
<th>Commodity group</th>
<th>FSR</th>
<th>of which:</th>
<th>EU &amp;</th>
<th>of which:</th>
<th>Baltics</th>
<th>of which:</th>
<th>CMEA</th>
<th>of which:</th>
<th>Other countries</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Live animals; animal products</td>
<td>32.9</td>
<td>18.9</td>
<td>1.2</td>
<td>2.5</td>
<td>39.4</td>
<td>7.5</td>
<td>1.3</td>
<td>0.5</td>
<td>0.25</td>
<td>0.1</td>
</tr>
<tr>
<td>Vegetable products</td>
<td>52.6</td>
<td>39.0</td>
<td>0.7</td>
<td>11.4</td>
<td>29.7</td>
<td>22.5</td>
<td>0.0</td>
<td>0.7</td>
<td>0.4</td>
<td>0.3</td>
</tr>
<tr>
<td>Animal or vegetable fats, oils, waxes</td>
<td>90.1</td>
<td>71.2</td>
<td>2.4</td>
<td>7.1</td>
<td>2.2</td>
<td>0.7</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>1.4</td>
</tr>
<tr>
<td>Prepared foodstuff; beverages, spirits, vinegar; tobacco</td>
<td>90.2</td>
<td>70.8</td>
<td>2.6</td>
<td>5.3</td>
<td>4.8</td>
<td>1.2</td>
<td>0.0</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Mineral products</td>
<td>47.3</td>
<td>27.7</td>
<td>15.8</td>
<td>8.1</td>
<td>13.8</td>
<td>0.9</td>
<td>0.9</td>
<td>4.3</td>
<td>4.4</td>
<td>2.6</td>
</tr>
<tr>
<td>Products of chemical or allied industries</td>
<td>20.0</td>
<td>9.6</td>
<td>2.3</td>
<td>6.1</td>
<td>51.8</td>
<td>19.8</td>
<td>0.1</td>
<td>0.2</td>
<td>11.6</td>
<td>4.8</td>
</tr>
<tr>
<td>Plastics and rubber; articles thereof</td>
<td>37.1</td>
<td>17.5</td>
<td>3.6</td>
<td>13.9</td>
<td>42.0</td>
<td>12.2</td>
<td>2.5</td>
<td>1.0</td>
<td>7.4</td>
<td>2.7</td>
</tr>
<tr>
<td>Raw hides and skins, leather, furskins and articles thereof</td>
<td>32.8</td>
<td>16.6</td>
<td>4.9</td>
<td>5.3</td>
<td>57.6</td>
<td>11.4</td>
<td>2.5</td>
<td>22.9</td>
<td>8.0</td>
<td>4.0</td>
</tr>
</tbody>
</table>

**EXPORTS**

- Wood and articles of wood: 14.1
- Pulp of wood; paper, paperboard; articles thereof: 52.3
- Textiles and textile articles: 29.4
- Footwear, headgear; feathers and articles thereof: 65.1
- Articles of stone, plaster, cement; ceramic; glass: 65.3
- Precious or semiprecious stones, precious metals, pearls: 3.6
- Base metals and articles of base metals: 9.5
- Machinery, equipment; TV and sound recorders and reproducers: 74.7
- Vehicles, aircraft, vessels and other transport equipment: 53.1
- Optical, photographic, medical instruments and apparatus: 66.0
- Arms and ammunition: 82.1
- Miscellaneous manufactured articles: 58.6
- Works of art, collectors’ pieces and antiques: 0.0

**TOTAL EXPORTS**: 46.6

---

**IMPORTS**

- Live animals; animal products: 14.8
- Vegetable products: 17.8
- Animal or vegetable fats, oils, waxes: 14.8
- Prepared foodstuff; beverages, spirits, vinegar; tobacco: 11.4
- Mineral products: 95.3
- Products of chemical or allied industries: 37.2
- Plastics and rubber; articles thereof: 33.2
- Raw hides and skins, leather, furskins and articles thereof: 47.0
- Wood and articles of wood: 22.3
- Pulp of wood; paper, paperboard; articles thereof: 29.4
- Textiles and textile articles: 30.1
- Footwear, headgear; feathers and articles thereof: 5.6
- Articles of stone, plaster, cement; ceramic; glass: 34.9
- Precious or semiprecious stones, precious metals, pearls: 51.9
- Base metals and articles of base metals: 67.7
- Machinery, equipment; TV and sound recorders and reproducers: 20.1
- Vehicles, aircraft, vessels and other transport equipment: 25.2
- Optical, photographic, medical instruments and apparatus: 9.3
- Arms and ammunition: 8.1
- Miscellaneous manufactured articles: 4.1
- Works of art, collectors’ pieces and antiques: 0.3

**TOTAL IMPORTS**: 50.2

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Source: Lithuanian Department of Statistics

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