Vietnam's Export Competitiveness: Trade and Macroeconomic Policy Linkages

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Final Report

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Acronyms and Abbreviations

AFTA	Asian Free Trade Area
ASEAN	Association of Southeast Asian Nations
BTA	Bilateral Trade Agreement
CEPT	Common Effective Preferential Tariff
CPI	Consumer Price Index
EC	European Commission
EPZs	Export processing zones
ERP	Effective Rate of Protection
FDI	Foreign Direct Investment
GSO	General Statistical Office
GSP	Generalized System of Preferences
GTAP	Global Trade Analysis
HS	Harmonized System
IMF	International Monetary Fund
MFN	Most-Favored-Nation
NRP	Nominal Rate of Protection
NTBs	Non-tariff barriers
PPP	Purchasing power parity
PTA	Preferential trade arrangements
QRs	Quantitative restrictions
REER	Real effective exchange rate
RCA	Revealed Comparative Advantage
SER	Shadow exchange rate
SITC	Standard International Trade Classification
TEL	Temporary Exclusion List
UN	United Nations
WTO	World Trade Organization

Executive Summary

Introduction

This annex represents the draft final report of the export competitiveness study that forms part of a broad trade policy review for Vietnam. It aims to identify macro and micro-economic measures that promote the international competitiveness and export growth of Vietnam, thereby raising living standards and improving welfare. Apart from investigating macro and micro-economic aspects affecting the trade environment, the study describes key characteristics of Vietnam's export structure and performance over the last decade based on national and partner-country trade information, it analyzes static and dynamic aspects of Vietnam's comparative advantage, it evaluates the compatibility of exports in their major markets, and it assesses the policy-performance links in the last decade to draw lessons for future trade and macroeconomic policies.

The study is organized into the following components: Chapter 1 provides background information on Vietnam's international competitiveness rankings, and reviews the coverage of the report. Chapter 2 describes the structure and geographic composition of Vietnam's trade, based on data from both national statistical sources and Vietnam's trading partners. Chapter 3 analyzes the comparative advantage of Vietnam relative to other Southeast Asian countries from both static and dynamic perspectives. Chapter 4 assesses key microeconomic factors affecting Vietnam's export competitiveness in terms of production costs, export incentives, and domestic and partner country trade barriers. Chapter 5 evaluates Vietnam's macroeconomic competitiveness associated with its real effective exchange rate and the real cross-exchange rate between Vietnam and its trading partners, and examines the impact of Vietnam's international competitiveness on its exports in each of the major regional markets, as well as the global market. Chapter 6 provides summary of the major findings and some recommendations to improve Vietnam's export competitiveness. Technical details on modeling trade and exchange rate movements, calculating effective rates of protection, and measuring revealed comparative advantage are included in the annex.

Fieldwork for this study was conducted in Vietnam during November 2001 by Montague Lord under the direction of Mr. Kazi Matin, Lead Economist of the World Bank Hanoi office and Mr. Sarath Rajapatirana, Team Leader and Consultant. The study benefited greatly from the assistance of Dr. Vo Tri Thanh, who served as the local consultant for this study.

Background

Vietnam has a relatively low competitiveness ranking among countries in terms of both its macro and micro-economic indicators. In 2001 the World Economic Forum ranked Vietnam in the 60th position out of the 75 countries for which composite indices were calculated from several macroeconomic indicators. Its microeconomic indicator-based

competitiveness ranking by the World Economic Forum was 62nd out of the 75 countries. Yet Vietnam had one of the highest export growth rates in the world during the 1990s, during which time it averaged 23 percent annual growth. This strong expansion followed the introduction of broad-based reforms under *doi moi,* or renewal policies, covering price liberalization, exchange rate adjustments to bring the dong closer to its free market level, and the adoption of a positive interest rate regime and an enabling legal framework to improve the investment environment.

In the initial phases of *doi moi* growth was primarily driven by the mobilization of primary factors of production for the production and export of goods requiring unskilled labor. The Government's efforts to provide macroeconomic stability and allow prices to reflect market conditions were sufficient for producers of primary commodities and unskilled labor-intensive manufactures. As the economy has developed since the mid-1990s, export-oriented production processes have become increasingly dependent on foreign direct investment and joint ventures that served to attract capital and technologies and helped to integrate the economy into global production systems. It is at this stage that supporting micro and macro-economic policies and regulations and institutions affecting the business environment have becomes critical to attracting financial capital and ensuring the transfer of appropriate technologies. Vietnam's export competitiveness now largely depends on its ability to attract foreign direct investment and technologies that permit it to use efficient infrastructure and modern methods for the productions of products and services directed at the global marketplace.

Market Compatibility and Product Complementarities

Vietnam and other Asian countries generally export similar types of products, implying a relatively low level of complementarity opportunities for intra-regional trade within the Southeast Asia region and with China. These similarities are particularly apparent in food and live animals, mineral fuels and wood and cork manufactures among natural resource-intensive products, and among the unskilled labor-intensive products, in footwear and travel goods and handbags, clothing and furniture. The similarity of these exports by Vietnam and other Asian countries suggests that, by developing cross-border production facilities and benefiting from economies of scale, exporters could improve their export performance in the world market. Moreover, the promotion of FDI activities in these activities would help to shift the focus of foreign investors to industries having a sustainable impact on production patterns by changing technologies and improving worker skills.

In the context of Vietnam's trade with different regional groupings and major trading patterns, the central indicator of the ability to alter its comparative advantage is the degree of trade compatibility between its export structure and that of its regional or bilateral trading partners. Our results confirm expectations: Vietnam has a higher degree of compatibility with the United States and the European Union than with ASEAN and China, and medium and small size exports generally have the highest degree of trade compatibility. Finally, Vietnam's ability to affect its market position based on the competitiveness of its products in regional and country-specific markets has been

measured by the trend growth rate of product exports and the ratio of product exports relative to market imports of those products.

Micro Determinants of Competitiveness

Vietnam's export competitiveness has been assessed on the basis of production costs, the real exchange rate and trade policies affecting export incentives, domestic trade barriers, and foreign market access. In production costs, Vietnam's unskilled labor costs are low relative to other ASEAN countries, but high utility costs undermine the potential competitiveness of businesses and create a disincentive to foreign investment in Vietnam. Electricity costs are higher than those of other countries in the region, as are water rates, and fuel costs are especially high when compared to those of other countries in the region. Pricing policies for these utilities should be examined and, to the extent possible, revised to bring costs in line with those of other ASEAN countries.

Tariffs remain generally high and their non-uniform structure has given rise to large variations in effective rates of protection across industries, and consequently preference being afforded to some industries. Vietnam's continued use of tariff escalation by stages of production reinforces import-substitution policies and favors the least beneficial kinds of production that have little value added for the economy. For Vietnam's export competitiveness, tariffs on tradable inputs used in export-oriented industries can create an anti-export bias. Those industries attempting to export rather than sell in the domestic market receive no output tariff protection but must nevertheless pay the protected input costs of tradable inputs. The negative effects from the higher costs of inputs are greatest for the textile and apparel industries, vegetable oils and fats, paper products, leather products and fishing and food products. Although duties on inputs are in principle offset by the existing duty-drawback scheme in Vietnam, administrative obstacles and delays discourage use of the facility.

Macro Determinants of Competitiveness

While real exchange rate movements in recent years would generally suggest a modest deterioration in Vietnam's international competitiveness, a more appropriate indicator of competitiveness is the real cross-rates of Vietnam with its major trading partners. Using this indicator, we find that Vietnam's competitiveness in the last few years has improved in the Chinese market and, to a lesser extent, in that of the United States, while its competitiveness in the markets of ASEAN, Japan and the European Union has worsened. The loss of competitiveness in the European market is the consequence of the appreciation of the dollar relative to the euro and the close association of the dong with the US dollar.

To the extent that foreign market importers are responsive to relative price differences between Vietnam and competing suppliers to those markets, the demand for exports of Vietnam would be more favorable in the US and Chinese markets than in those of the Japan, the EU and the ASEAN-5. Our results confirm expectations about the relatively high income-elasticities of export demand for Vietnam's exports and, as such, the more favorable demand likely to exist in the US and Chinese markets for exports of Vietnam

than that in the Japanese, EU and ASEAN-5 markets. From a policy perspective, the long-term sustainability of Vietnam's international competitiveness associated with real exchange rate movements will depend on the Government's ability to maintain tight monetary and fiscal policies that ensure low inflation and prevent any further erosion in Vietnam's export competitiveness.

Conclusions and Recommendations

Despite an overall exports expansion averaging about 24 percent in 1999-2000, and an increasingly diversified geographic and commodity composition of exports, the recent downturn of global activity has slowed the growth of exports and made their long-term prospects uncertain. Already weak external demand conditions in Japan, Vietnam's largest market, were exacerbated by the September 11 terrorist attacks, as were economic activity in the trade-dependent economies of Southeast Asia. At the same time, Vietnam's greater openness relative to what it was a decade ago has made its economy more vulnerable to these external demand influences, and raised the importance of its export competitiveness. Yet internally the Government of Vietnam's slow adjustment to changing global economic conditions, the lack of a broad-based private sector, and the inefficiency of state enterprises is undermining Vietnam's competitive position in its major export markets. Favorable macroeconomic conditions for exports from the flexible exchange rate management and stable domestic prices have only partially compensated these structural problems in the economy.

The analysis in this report suggests that macroeconomic and microeconomic factors determining the competitiveness of Vietnam's exports have become increasingly important since the mid-1990s. As the dependency of export-oriented production processes on foreign direct investment for capital and technologies has risen, the importance of micro and macro-economic policies and regulations and institutions affecting the business environment have grown. Vietnam's prospects for export growth largely depends on the ability to attract foreign direct investment and technologies that permit it to use efficient infrastructure and modern methods for the productions of products and services directed at the global marketplace. Yet weak external demand conditions and unfavorable factors affecting Vietnam's international competitiveness could undermine the sustainability of the country's strong export growth prospects. Table S.1 summarizes the major constraints and proposed policy and institutional reforms needed to remedy these shortcomings.

Table S.1
Proposed Policy, Regulatory and Institutional Reforms

Existing Constraint	Proposed Action	Expected Impact/Benefit
POLICIES:		
Strong export performances in similar product categories as other Southeast Asian economies	Provide cross-border investment incentive to promote joint ventures for export-oriented production and marketing facilities	Develop cross-border production facilities and benefiting from economies of scale, exporters could improve their export performance in the world market
High utility and infrastructural costs undermine competitiveness of companies.	Examine costing policies for infrastructure and utility costs for business activities to bring them in line with other ASEAN countries..	Improvement in microeconomic determinants of competitiveness
Companies do not always use duty drawback schemes because of slow and cumbersome procedures	Make access to foreign inputs through the duty drawback and temporary admission system automatic and eliminate undue delays in receiving drawbacks and exemptions from duties and taxes paid on inputs.	Promote exports, especially for newly emerging and medium-size products.
Foreign exchange surrender requirement of 40 percent creates disincentive to FDI inflows.	Phase out surrender requirements within a specified period of time.	Attract more FDI by making investment conditions more attractive to foreign companies.
Multiple bands and few items in certain bands indicate that preferential treatment is being given to selected industries.	Eliminate nominal tariff dispersion by moving to fewer rates to make incentive structure uniform across industries	Promote exports, especially for newly emerging and medium-size products.
Lack of sufficient a large interbank market has prevented the dong from adjusting to changed market conditions, and consequently undermined Vietnam's export competitiveness	Make the exchange rate system more responsive to changes in domestic and international prices by moving toward a more flexible exchange rate regime.	Enhance export competitiveness and provide a favorable investment climate that encourages capital inflows and technology transfers.
INSTITUTIONAL SUPPORT		
Lack of reliable and readily available product and partner-country trade data for recent years.	General Statistical Office (GSO) to upgrade its reporting system for detailed trade statistics, including Internet-based distribution of information.	Support Government's policy-making and private sector industry-level analysis
Lack of awareness of high trade compatibility of small and medium-size exports with Asian, US and EU markets.	Enhance trade promotion efforts in Ministry of Trade to support emerging exports to Asian, US and EU markets.	Diversification of exports and improved market information system for small and medium size exporters.
Lack of information on products with rapidly expanding imports in Chinese, Japanese, ASEAN, EU and US markets.	Develop market information system for product-specific China, Japan, ASEAN, EU and US markets through Ministry of Trade.	Enhanced ability to adopt technologies to new and emerging exports in high growth product markets.
Investment incentives of export processing zones (EPZs) undermined by overlapping national and provincial government authorities.	Streamlining investment procedures and centralize authority for export processing zones.	Promote greater use of EPZs and thereby stimulate investment and export growth.

Chapter 1: Introduction

A. Background

Vietnam has a relatively low competitiveness ranking among countries in terms of both its macro and micro-economic indicators. In 2001 the World Economic Forum ranked Vietnam in the 60th position out of the 75 countries for which composite indices were calculated from several macroeconomic indicators.[1] That position compared with a ranking of 52 in the previous year. Its microeconomic indicator-based competitiveness ranking by the World Economic Forum was 62nd out of the 75 countries, down from its ranking of 53 the previous year. These rankings reflected poor scores in a broad range of policy and institutional measures that are essential to the integration of an economy into the international production system.

Notwithstanding these relatively poor conditions, Vietnam had one of the highest export growth rates in the world during the 1990s, during which time it averaged 23 percent annual growth. This strong expansion followed the introduction of broad-based reforms under *doi moi,* or renewal policies, covering price liberalization, exchange rate adjustments to bring the dong closer to its free market level, and the adoption of a positive interest rate regime and an enabling legal framework to improve the investment environment. Yet in the initial phases of *doi moi* growth was primarily driven by the mobilization of primary factors of production for the production and export of goods requiring unskilled labor. The Government's efforts to provide macroeconomic stability and allow prices to reflect market conditions were sufficient for producers of primary commodities and unskilled labor-intensive manufactures.

As the economy has developed since the mid-1990s, export-oriented production processes have become increasingly dependent on foreign direct investment and joint ventures that served to attract capital and technologies and helped to integrate the economy into global production systems. It is at this stage that supporting micro and macro-economic policies and regulations and institutions affecting the business environment have becomes critical to attracting financial capital and ensuring the transfer of appropriate technologies. Vietnam's export competitiveness now largely depends on its ability to attract foreign direct investment and technologies that permit it to use efficient infrastructure and modern methods for the productions of products and services directed at the global marketplace.

[1] This macro-oriented competitiveness index is composed of three categories: technology index (where Vietnam placed 65th), public institutions index (rank 63rd), and macroeconomic environment index (rank 34th). The ranking of macroeconomic environment is determined by macroeconomic stability (where Vietnam ranked 14th place), country credit rating (65th place) and government expenditure (14th place).

Within this framework, the main objective of this study is to examine both macroeconomic and microeconomic factors determining the competitiveness of Vietnam's exports with a view to providing guidelines for future policy formulation. The analysis is based on an assessment of the present trade situation and the interaction between the existing trade regime and macroeconomic policies. In particular, we base our analysis of Vietnam's export competitiveness on five broad categories: labor and utility costs, financial conditions, trade policies, macroeconomic policies, and exchange rate competitiveness. We also base our evaluation on Vietnam's comparative advantage from a static point of view, and the compatibility of its exports with the more dynamic foreign markets. The ability to adapt exports to these more dynamic markets by incorporating new technologies from foreign direct investment and developing new cross-border production facilities will ensure that Vietnam is able to exploit these markets and sustain high export growth rates.

B. Approach and Organization

This annex contributes to a broad-based trade study for Vietnam by examining the country's export competitiveness. The main thrust of this report is the identification of macro and micro-economic measures that promote the international competitiveness and export growth of the country, thereby raising living standards and improving welfare. Apart from investigating macro and micro-economic aspects affecting the trade environment, the study describes key characteristics of Vietnam's export structure and performance over the last decade based on national and partner-country trade information, it analyzes static and dynamic aspects of Vietnam's comparative advantage, it evaluates the compatibility of exports in their major markets, and it assesses the policy-performance links in the last decade to draw lessons for future trade and macroeconomic policies. Finally, in an effort to transfer knowledge to Vietnamese researchers as far as feasible, this study was undertaken with the assistance of a Vietnamese consultant during the fieldwork in November 2001.

After this brief introduction, the second section of the report describes the structure and geographic composition of Vietnam's trade, based on data from both national statistical sources and Vietnam's trading partners. It begins by discussing existing discrepancies between trade data from national statistical sources and some international organizations, and proposes the use of partner-country statistics from the United Nations database to estimate actual trade data at a detailed product and trading-partner level. While the credibility of that information is subject to possible erroneous reporting by one or more of the trading partners, it contains a large country set that is likely to reduce the errors associated with specific countries. Based on this data set, the study then describes Vietnam's recent commodity trade structure and the geographic destination of exports.

The third section of the report analyzes the comparative advantage of Vietnam relative to other Southeast Asian countries from both static and dynamic perspectives. It first examines the comparative advantages of Vietnam and other selected Asian countries in natural-resource intensive products, unskilled labor-intensive products, and human capital and technology-intensive products, using indices that 'reveal' the comparative advantage of

these countries in each of these factor-intensity categories. Comparative advantage analysis based on these indices is, however, a static concept. In reality, countries alter their situations by adopting new technologies either internally through research and development, or externally through foreign direct investment and the development of cross-border production facilities. The rest of the section therefore expands the concept to encompass the effects of changing technological situations and changing worker skills on production patterns of countries. In the context of Vietnam's trade with different regional groupings and major trading patterns, the central indicator of the ability to alter its comparative advantage is the degree of trade compatibility between its export structure and that of its regional or bilateral trading partners. Having established compatibility of traded products, we then invoke performance indicators to reveal the extent to which exporters are exploiting the more dynamic markets for traditional and newly emerging products of Vietnam.

The forth section assesses key microeconomic factors affecting Vietnam's export competitiveness in terms of production costs, export incentives, and domestic and partner country trade barriers. We describe the four major export incentive schemes used by Vietnam (duty drawbacks, export credit facilities, and export processing zones), examine current levels of nominal and effective rates of protection, and market access conditions under the World Trade Organization (WTO), the Common Effective Preferential Tariff (CEPT) of the Asian Free Trade Area (AFTA), the Generalized System of Preferences (GSP) provided to Vietnam by The United States, the European Union, Japan, Australia, and the recently signed U.S.-Vietnam Bilateral Trade Agreement. These market access conditions are only briefly described since they are covered in another annex to the overall trade study for Vietnam.

The fifth section evaluates Vietnam's macroeconomic competitiveness associated with its real exchange rate. First, we measure the real effective exchange rate and the real cross-exchange rate between Vietnam and its trading partners using two alternative measures of the real exchange rate. The first refers to the purchasing power based definition of the double-deflated nominal exchange rate of Vietnam with each of its trading partners, while the second refers to the ratio of partner-country and domestic price, measured in terms of the consumer price index (CPI). Next, we examine the impact of Vietnam's international competitiveness on its exports in each of the major regional markets, as well as the global market. The results provide evidence of the magnitude of the effect of real effective exchange rate changes on export demand. Finally, we measure the degree of boarder distortions on the official exchange rate through the shadow exchange rate, which incorporates into the official exchange rate the effect of relative price changes arising from commercial policies.

The study concludes with a summary of the major findings and some recommendations to improve Vietnam's export competitiveness. Technical details on modeling trade and exchange rate movements, calculating effective rates of protection, and measuring revealed comparative advantage are included as an annex to this report.

Chapter 2: Structure of Trade

A. Reconciling Vietnam's Export and Partner Trade Data

Trade statistics in Vietnam have improved in recent years. At present the Customs Department collects data from about 150 customs entry points and classifies the data based on the Harmonized System (HS) under the guidelines of the Statistical Commission of the United Nations. The data are then forwarded to the General Statistical Office (GSO), which reclassifies the data on the basis of Standard International Trade Classification (SITC), and makes adjustments to include exports not recorded by Customs, such as petroleum products and smuggled goods.

Data inconsistencies on the overall magnitude of trade are gradually being reduced, but discrepancies between the GSO and other data sources such as the United Nations (UN), International Monetary Fund (IMF), and European Commission (EC) continue to exist on composition and geographic origin and destination of trade. One commonly used approach to reconcile these differences is to use partner-country statistics from the United Nations COMTRADE database to estimate actual trade data at a detailed product and trading-partner level. The credibility of that information is, of course, subject to possible erroneous reporting by one or more of the trading partners. However, since the COMTRADE database contains a large country set, it is likely to reduce the errors associated with specific countries. Those differences that do exist are often associated with valuation differences and, especially in the case of Vietnam, the use of transit centers such as Singapore, Hong Kong, Korea and Taiwan (see European Commission, 1998).

Table 2.1
Vietnam Reported Exports and Partner Countries Reported Imports, 1998
(Million US dollars)

		EXPORTS		
SITC	DESCRIPTION	Reported by Vietnam	Reported by Partners	Difference
0	Food and live animals	2,812,171	2,549,818	262,353
1	Beverages and tobacco	4,600	17,531	-12,931
2	Crude materials excl fuels	256,903	221,953	34,950
3	Mineral fuels	1,442,414	1,345,462	96,952
4	Animal, vegetable oil, fat	15,647	25,586	-9,939
5	Chemicals	86,744	112,704	-25,960
6	Basic manufactures	440,715	602,121	-161,406
7	Machines, transport equipment	755,642	751,192	4,450
8	Misc manufactured goods	2,624,424	3,678,497	-1,054,073
9	Goods not classified by kind	3,474	28,521	-25,047
	Unclassified	917,527	0	917,527
	Total	**9,360,261**	**9,333,386**	**26,875**

Sources: Exports reported by Vietnam from Customs Department; exports of Vietnam reported as imports by trading partners, from COMTRADE data.

A comparison of Vietnam's export data reported by the Customs Department and the United Nations COMTRADE database is shown in Table 2.1 for aggregate SITC categories. Table 2.2 provides a greater level of disaggregation. The overall magnitude of trade between the two sources is only 0.3 percent, while much of the unclassified exports by the Customs Department appear under Miscellaneous Manufactured Goods, and in particular from footwear, furniture and, to a lesser extent, travel goods and clothing. Coffee, for example, may contribute to the magnitude reported under 'unclassified products' by the Customs Department (see Table 2.2). The explanation for differences in coffee and other products may lie in the large volume of entrepot trade, as well as the shipments originating from export processing zones (EPZs). Country-level data on the share of production and export of footwear and other products originating from EPZs are not available for Vietnam.

Other differences between export data reported by the Customs Department and the United Nations COMTRADE database appear to be mainly due to differences in classification. For example, many of the non-electrical machinery exports reported by Vietnam appear to be reported as electrical machinery imports by its trading partners. Unreported exports are also apparent, as for example in Vietnam's exports of tobacco. Differences in valuation and adjustments for under-reporting are likely to account for other differences.

B. Commodity Trade Structure

Based on COMTRADE data of more recent years than is available from the Customs Department, it is apparent that Vietnam's major exports are increasingly shifting from natural-resource-based products to manufactures. Table 2.3 lists the major export categories in 1998-2000. Ranked in terms of export value to the world, miscellaneous manufactures (SITC 8) accounted for nearly 45 percent of the country's export revenue in 2000, up from less than 40 percent two years earlier. Mineral fuels (SITC 3) also gained in importance. Their share of total export revenue expanded from 14 to 22 percent between 1998 and 2000. In contrast, non-fuel primary commodities (SITC 0, 1, 2 and 4) declined sharply — from 30 to 22 percent — during the same period.

These aggregate movements, however, obscure large divergent movements by individual product exports. Table 2.4 shows that 70 percent of manufactures are accounted for by footwear and textile clothing alone, while furniture, clothing accessories, and travel goods and handbags contribute another 19 percent. In foods, coffee and fish alone contribute 75 percent to all products in that category. Crude materials are concentrated in two products, natural rubber and nonferrous ores, which together represent nearly 60 percent of all products in this category. Only basic manufactures and, to a somewhat lesser extent, machinery and transportation equipment are diversified. In basic manufactures, 16 products – led by ceramics, diamonds, and wood simply worked – make up about two-thirds of exports.

Table 2.2:
Vietnam Reported Exports and Partner Countries Reported Imports from Vietnam, 1998 (Million US dollars)

		EXPORTS		
SITC	DESCRIPTION	Reported by Vietnam	Reported by Partners	Difference
	Total	**9,360,261**	**9,333,386**	**26,875**
00	Live animals	590	38	552
01	Meat and preparations	11,968	24,530	-12,562
02	Dairy products and eggs	24,664	11,090	13,574
03	Fish and preparations	788,276	746,009	42,267
04	Cereals and preparations	1,071,247	746,548	324,699
05	Fruit and vegetables	179,799	161,228	18,571
06	Sugar and preps honey	1,832	9,720	-7,888
07	Coffee tea cocoa spices	710,425	817,433	-107,008
08	Animal feeding stuff	-	6,323	-6,323
09	Misc food preparations	23,370	26,899	-3,529
11	Beverages	975	4,538	-3,563
12	Tobacco and mfrs	3,625	12,993	-9,368
21	Hides,skins,furs undrssd	3,870	6,525	-2,655
22	Oil seeds,nuts,kernels	46,033	21,451	24,582
23	Rubber crude,synthetic	127,463	81,581	45,882
24	Wood lumber and cork	18,597	22,184	-3,587
25	Pulp and waste paper	-	20	-20
26	Textile fibres	13,705	7,899	5,806
27	Crude fertlzr,minrls nes	4,822	17,675	-12,853
28	Metalliferous ores,scrap	16,440	18,549	-2,109
29	Crude animal,veg mat nes	25,973	46,070	-20,097
32	Coal,coke,briquettes	101,503	120,098	-18,595
33	Petroleum and products	1,340,101	1,222,581	117,520
34	Gas natural and manufctd	810	2,783	-1,973
42	Fixed vegetable oil,fat	15,647	25,321	-9,674
43	Procesd anml veg oil,etc	-	235	-235
51	Chem elements,compounds	30,580	64,813	-34,233
52	Coal,petroleum etc chems	685	0	685
53	Dyes,tanning,colour prod	311	308	3
54	Medicinal etc products	5,088	3,720	1,368
55	Perfume,cleaning etc prd	42,467	24,479	17,988
56	Fertilizers manufactured	1,346	2,021	-675
58	Plastic materials etc	32	6,283	-6,251
59	Chemicals nes	6,235	11,013	-4,778
61	Leather,dressed fur,etc	1,537	25,702	-24,165
62	Rubber manufactures nes	19,077	23,935	-4,858
63	Wood,cork manufactrs nes	73,477	74,658	-1,181
64	Paper,paperboard and mfr	39,104	29,190	9,914
65	Textile yarn,fabric etc	162,887	223,415	-60,528
66	Nonmetal mineral mfs nes	72,034	132,209	-60,175
67	Iron and steel	23,290	11,717	11,573
68	Non-ferrous metals	21,895	19,454	2,441
69	Metal manufactures nes	27,414	61,841	-34,427
71	Machinery,non-electric	443,276	62,241	381,035
72	Electrical machinery	249,533	643,793	-394,260
73	Transport equipment	62,833	45,159	17,674
81	Plumbg,heatng,lghtng equ	-	6,739	-6,739
82	Furniture	66,800	243,899	-177,099
83	Travel goods,handbags	131,337	214,673	-83,336
84	Clothing	1,306,616	1,390,916	-84,300
85	Footwear	969,978	1,567,912	-597,934
86	Instrmnts,watches,clocks	16,640	32,146	-15,506
89	Misc manufctrd goods nes	133,053	222,212	-89,159
	Unclassified	917,527	0	917,527

Sources: Trade reported by Vietnam, from customs authority; trade of Vietnam reported by

Table 2.3
Percentage Distribution of Vietnam Exports by Major SITC Category, 1998-2000
(Million US dollars)

SITC	Description	1998	1999	2000	Main Products
8	Misc manufactured goods	39.4%	39.7%	43.5%	Footwear, textile clothes, furniture, clothing accessories, travel goods and handbags, toys
3	Mineral fuels etc	14.4%	18.3%	21.8%	Crude petroleum, coal, coke of coal, lubricating oils, greases
0	Food and live animals	27.3%	24.8%	19.7%	Shellfish, coffee, fish, rice, peppers, nuts, edible vegetables, tea, other food preparations
6	Basic manufactures	6.5%	6.6%	6.0%	Ceramic ornaments and articles, textile products, diamonds, wood simply worked
7	Machines, transport equip	8.0%	6.3%	5.4%	Insulated wire and cable, electric power machinery, telecom equipment, switchgear, bicycles
2	Crude materials excl fuels	2.4%	2.5%	2.2%	Natural rubber, nonferrous ore, groundnuts, hides and skins, vegetables used in pharmacy
5	Chemicals	1.2%	1.2%	0.9%	Nitrogen function compouds, starch, cosmetics, chemical preparations
9	Goods not classed by kind	0.3%	0.4%	0.3%	Special transactions, zoo animals and pets
4	Animal, vegetable oil, fat	0.3%	0.2%	0.2%	Coconut oil, palm oil, fixed vegetable oil
1	Beverages and tobacco	0.2%	0.1%	0.1%	Non-alcoholic beverages, cigarettes
	Total	100.0%	100.0%	100.0%	

Source: Derived from COMTRADE data for Vietnam's trading partners.

Table 2.5
Percentage Distribution of Vietnam's Exports, 2000

	Value
Japan	18.8%
China	11.0%
Australia	9.1%
Singapore	6.4%
Taiwan	5.4%
United States	5.3%
Germany	5.2%
United Kingdom	3.4%
Philippines	3.4%
Malaysia	3.0%
Holland	2.8%
Thailand	2.8%
France	2.7%
South Korea	2.5%
Iraq	2.3%
Hong Kong	2.3%
Belgium	2.2%
Indonesia	1.8%
Italy	1.6%
Switzerland	1.2%
Spain	1.0%
Cambodia	1.0%
Total	**100%**

Source: IMF.

C. Trade Flows

Vietnam's exports are concentrated in relatively few markets. The four top markets – Japan, China, Australia and Singapore—absorb nearly 40 percent of all exports. Taiwan, the United Sates and Germany each account for about 5 percent of total exports. Most of the other important markets are either countries in Southeast Asian (Philippines, Malaysia, Thailand, Indonesia and Cambodia) or in Europe (Holland, France, Belgium, Italy, Switzerland and Spain).

Among the major export products, the market rankings vary considerably. For example, the major markets for crude oil are Australia, China, Singapore and Japan; the major export markets for coffee are the Switzerland, United States and Germany; the major markets for footwear are the United Kingdom, Germany, Belgium, France, Holland, and the United States; the major markets for garments and textiles are Japan, Germany and Taiwan; the major markets for seafood are Japan and the United States; and the major market for vegetables is China, all other markets being considerably smaller to that one. Similarly, for rice, one market – Iraq – dominates as a market.

Table 2.4
Vietnam Export by SITC Product Category, 1998-2000
(Million US dollars)

SITC	Description	1998	1999	2000
	Total	***9,333,386***	***10,922,001***	***10,074,120***
33	Petroleum and products	1,222,581	1,872,020	2,100,309
85	Footwear	1,567,912	1,949,883	2,007,260
84	Clothing	1,390,916	1,484,303	1,507,073
03	Fish and preparations	746,009	835,755	1,008,632
07	Coffee tea cocoa spices	817,433	811,432	607,403
72	Electrical machinery	643,793	537,531	368,578
82	Furniture	243,899	330,600	324,623
89	Misc manufactures nes	222,212	263,885	255,636
83	Travel goods, handbags	214,673	242,021	228,825
65	Textile yarn, fabric etc	223,415	276,121	214,723
66	Nonmetal mineral mfs nes	132,209	180,125	195,530
04	Cereals and preparations	746,548	830,219	172,375
05	Fruit and vegetables	161,228	166,557	156,325
23	Rubber crude, synthetic	81,581	116,798	120,419
71	Machinery, non-electric	62,241	97,804	120,210
32	Coal, coke, briquettes	120,098	120,318	93,554
63	Wood, cork manufactures nes	74,658	84,520	69,673
73	Transport equipment	45,159	49,491	51,576
69	Metal manufactures nes	61,841	58,991	48,214
51	Chemical elements	64,813	71,236	46,704
86	Instruments, watches, clocks	32,146	50,421	45,637
29	Crude animal, veg mat nes	46,070	52,499	28,106
28	Metalliferous ores, scrap	18,549	25,958	24,647
61	Leather, dressed fur	25,702	27,416	24,099
94	Zoo animals, pets	23,751	34,522	23,928
64	Paper, paperboard and mfr	29,190	33,998	17,690
62	Rubber manufactures nes	23,935	30,949	17,085
09	Misc food preparations	26,899	20,594	16,437
42	Fixed vegetable oil, fat	25,321	24,503	16,378
59	Chemicals nes	11,013	19,933	15,669
06	Sugar and preps honey	9,720	13,976	15,011
27	Crude fertilizer, minerals nes	17,675	16,043	14,984
67	Iron and steel	11,717	13,681	13,858
22	Oil seeds, nuts, kernels	21,451	17,469	12,833
55	Perfume, cleaning etc prd	24,479	21,353	11,891
24	Wood lumber and cork	22,184	31,489	11,105
81	Plumbing, heating, light eq.	6,739	13,734	10,632
	Sub-Total	*9,219,758*	*10,828,150*	*10,017,634*
	Other	113,628	93,851	56,486

Note: Includes SITC two-digit categories greater than US$10 million.
Source: Derived from COMTRADE data for Vietnam's trading partners.

Chapter 3: Comparative Advantages

A. Comparative Advantage

Vietnam's exports are made up of goods with a relatively high level of productivity, and with factors in which Vietnam is abundantly endowed. Table 3.1 shows the comparative advantages of export product divisions of Vietnam and other selected Asian countries in three factor-intensity categories: natural-resource intensive products, unskilled labor-intensive products, and human capital and technology-intensive products. The indices measure the 'revealed' comparative advantage (RCA) of the countries in each factor-intensity category: when the value of the index is greater than one, it implies a measurable degree of comparative advantage in a product category; when it is less than one, it suggests a comparative disadvantage.[2]

Vietnam and other Asian countries generally have strong export performances in similar product categories, implying a relatively low level of complementarity opportunities for intra-regional trade within the Southeast Asia region and with China. In the *natural resource-intensive products*, Vietnam has a comparative advantage in food and live animals, mineral fuels and wood and cork manufactures. Indonesia also has a comparative advantage in those three product categories and most other countries have a comparative advantage in one or more of the product categories. In *unskilled labor-intensive products*, Vietnam also has a strong comparative advantage in footwear and travel goods and handbags, as do Indonesia, Thailand and China; it has a comparative advantage in clothing, as do Indonesia, the Philippines, Thailand and China; and it has a comparative advantage in furniture, as do most other countries in the region.

The similarity of export performances across product divisions for Vietnam and other Asian countries suggests that, by developing cross-border production facilities and benefiting from economies of scale, exporters could improve their export performance in the world market. For this expansion to happen, however, problems of sufficient capital required to upgrade processing techniques will need to be overcome. The ability and willingness of businesses to enter into joint ventures will naturally depend on comparative production costs between countries, production costs, economic policies and the regulatory environment.

[2] For comparative RCA indices for the industrialized countries and developing regions, see Lord (1999).

Table 3.1
Revealed Comparative Advantage of Vietnam, ASEAN-5 and China, 2000

Category/Product Division	HS	Vietnam	Indonesia	Malaysia	Philippines	Singapore	Thailand	China
Natural Resource-Intensive:		**2.06**	**2.31**	**0.94**	**0.67**	**0.60**	**1.20**	**0.60**
Food and Live Animals	00-09	**3.48**	**1.01**	0.35	**1.24**	0.23	**3.03**	0.88
Mineral Fuels	32-35	**2.78**	**3.28**	0.88	0.16	**1.26**	0.23	0.41
Wood and Cork Manufactures	63	**1.17**	**8.97**	**3.40**	**1.38**	0.15	**1.06**	**1.22**
Non-Metallic Mineral Manufactures	66	0.97	0.66	0.36	0.33	0.20	**1.26**	0.97
Crude Materials, Inedible (ex.fuels)	21-29	0.70	2.24	0.99	0.72	0.23	**1.18**	0.56
Animal and Vegetable Oils	41-43	0.64	**11.02**	**21.93**	**8.05**	0.61	0.55	0.18
Beverages and Tobacco	11-12	0.13	0.39	0.34	0.36	0.83	0.29	0.31
Paper and Paperboard	64	0.09	1.87	0.27	0.21	0.17	0.53	0.27
Fertilizers, Manufactured	56	0.00	1.37	0.42	**1.05**	0.02	0.15	0.75
Unskilled Labor-Intensive:		**5.59**	**2.53**	**0.77**	**1.58**	**0.30**	**1.79**	**3.78**
Footwear	85	**33.55**	**4.43**	0.15	0.71	0.17	**2.30**	**6.47**
Travel Goods and Handbags	83	**11.46**	**1.36**	0.12	**4.65**	0.16	**4.01**	**7.95**
Clothing	84	**5.19**	**2.74**	0.94	**2.56**	0.47	**2.14**	**5.07**
Furniture	82	**2.85**	**2.21**	**1.49**	**1.88**	0.08	**1.24**	**1.65**
Textile Yarn	65	0.86	**2.31**	0.54	0.49	0.27	**1.29**	**2.64**
Leather and Manufactures	61	0.67	0.75	0.13	0.04	0.24	**2.12**	**1.38**
Human Capital/Technology-Inten:		**0.15**	**0.40**	**1.04**	**1.04**	**1.21**	**0.85**	**0.82**
Miscellaneous Manufactured Goods	89	0.56	**1.04**	**1.09**	0.60	**1.09**	**1.27**	**2.49**
Plumbing, Heating, Lighting Equip	81	0.33	0.45	0.25	0.65	0.19	0.73	**2.78**
Electrical Machinery and Appliances	72	0.23	0.52	**2.30**	**2.35**	**2.43**	**1.28**	**1.08**
Manufactures of Metal	69	0.22	0.44	0.44	0.26	0.34	0.69	**1.51**
Rubber Manufactures	62	0.21	0.75	0.55	0.55	0.30	**1.28**	0.74
Explosives, Pyrotech Products	57	0.20	0.10	0.09	**1.56**	**12.97**	0.07	**3.32**
Chemical Elements and Compounds	51	0.14	0.68	0.29	0.14	0.74	0.35	0.73
Essential Oils, Perfume Materials.	55	0.14	0.63	0.36	0.29	0.69	0.52	0.23
Professional and Scientific Inst	86	0.14	0.16	0.46	0.16	0.93	0.62	**1.02**
Chemical Materials and Products	59	0.13	0.28	0.56	0.23	0.62	0.63	0.44
Non-Electrical Machinery	71	0.07	0.38	**1.44**	**1.64**	**1.74**	**1.13**	0.65
Iron and Steel	67	0.05	0.33	0.26	0.05	0.17	0.42	0.79
Transport Equipment	73	0.04	0.07	0.12	0.24	0.13	0.27	0.26
Plastic Materials, Cellulose	58	0.03	0.66	0.42	0.13	0.42	**1.17**	0.19
Medicinal and Pharm Products	54	0.02	0.06	0.04	0.06	0.35	0.09	0.34
Dyeing, Tanning Materials	53	0.02	0.27	0.34	0.07	0.91	0.28	0.73
Inorganic Chemicals	52	-	0.49	0.00	-	0.97	0.99	0.18

Note: Classification based on Murray (1987), Fukasaku (1991).
Source: COMTRADE database.

B. Trade Compatibility in Foreign Markets

Comparative advantage analysis based on RCA indices is a static concept. In reality, countries alter their situations by adopting new technologies either internally through research and development, or externally through foreign direct investment (FDI) and the development of cross-border production facilities. These new technologies allow them to change their comparative advantage, exploit new markets and, in the case of Vietnam, to converge to levels of income and economic structures similar to those of developed economies. Comparative advantage analysis therefore needs to be modified and expanded to encompass the effects of changing technological situations and changing worker skills on production patterns of countries.

One alternative approach adopted from business economics by both the World Bank and the United Nations Economic Commission for Latin America (TradeCan, 2000) is to assume that there are few natural resource and technological differences between countries. Under these conditions, the degree of concentration or so-called agglomeration of industries helps to accounts for developmental differences between countries. The concentration of industrial activity in particular a location has allowed some countries to advance more quickly than those countries without industrial agglomeration. By changing the manufacturing production base of countries, preferential trade arrangements (PTAs) can help to alter and accelerate the development process of countries.[3]

In the context of Vietnam's trade with different regional groupings and major trading patterns, the central indicator of the ability to alter its comparative advantage is the degree of trade compatibility between its export structure and that of its regional or bilateral trading partners. Having established compatibility of traded products, one can then invoke performance indicators to reveal the extent to which firms compete effectively in those markets. Success in export markets – measured by rapidly expanding exports and rising market shares – indicates the extent to which an economy such as Vietnam is willing and able to achieve global integration and alter its comparative advantage in the regional and global marketplace.

In the remainder of this chapter, we examine Vietnam's trade compatibility with the ASEAN-5[4], China, the United States and the European Union from the point of view of its exports to those markets, and use a set of performance indicators to identify those products that could benefit from regional and bilateral arrangements such as the U.S.-Vietnam Bilateral Agreement. In particular, we used the following criteria to select the products with growth potential in those markets: (a) the degree of trade compatibility between Vietnam and the markets, (b) Vietnam's recent export growth record, and (c) the trend growth rate of Vietnam's product market share.

1. Product Selection Procedure

The analysis of trade compatibility and export performance concentrates on the following: (1) exports of Vietnam; (2) product aggregation at the 4-digit SITC level; and (3) data analysis based on the period 1995-2000, with the product selection procedure based on 2000 data.

The analysis of Vietnam's exports was divided into the following four types of product exports:

[3] Hanson (1994), for example, has shown that the recent agglomeration of industries in Mexico has been associated with increasing returns to scale. In a subsequent study, Hanson (2000) illustrated that the PTA with the United States has strongly influenced the degree of industrial agglomeration in Mexico, as industries have increasingly shifted to locations with easy access to the U.S. market and thereby generated growing employment and incomes in those areas.

[4] Indonesia, Malaysia, Philippines, Thailand and Singapore.

(1) Large traditional product exports, defined as those products that in 2000 represented an average of at least US$100 million. There were fourteen (14) products in this range.

(2) Medium-size exports, whose product export value represented between US$40 million and US$100 million. There were twelve (12) products in this range.

(3) Small-size exports of between US$20 million and US$40 million. There were thirteen (13) products in this range

(4) Newly emerging exports of between US$14 million and US$20 million. There were thirteen (13) products in this range

Using these value ranges, the total number of products in the sample consisted of 52 products out of a total of 590 products. (Exports of the remaining 538 products were each under US$14 million.) Together the products in the sample accounted for 93 percent of the total value of exports.

2. Trade Compatibility Measure

The trade compatibility index measures the degree of compatibility between Vietnam's exported products and those products imported by the foreign market. The index of compatibility ($C_{x/m}$) is computed using the following formula:

$$C_{x/m} = 1 - (\Sigma|x_{vn} - m_{mk}|)/2$$

where x_{vn} is Vietnam's share of good *i* exports relative to its total exports, and m_{mk} is the share of foreign market good *i* imports relative to its total imports. The index approaches zero when Vietnam exports none of what the foreign market imports, and it approaches unity when the exports share of product *i* of Vietnam is identical to the import share of that product by the foreign market. According to Michaely (2000), the index of compatibility is usually between 0.50 and 0.60 for trade between industrialized countries, and it averages about 0.20 for trade between Latin America countries.[5]

Overall, the unweighted average of the four product categories for Vietnam's exports and foreign market imports equals 0.38, which lies between the index of trade between Latin American countries and that of trade between the developed countries. Within the four market groupings, the results confirm expectations: Vietnam has a higher degree of compatibility with the United States and the European Union than with the ASEAN-5 and China (Table 3.2). Within the four categories, it is the medium and small size exports that generally have the highest degree of trade compatibility with all the markets. These categories includes a broad set of products that range from peppers, nuts and other vegetable products to ceramics, basketworks, textile articles, and electric powered machinery. Vietnam's traditional (large-size) exports are somewhat less compatible with

[5] The index was originally developed by Michaely (1994) and has recently been applied by Rajapatirana (1997) and Michaely (2000) to Latin American trade.

foreign market foreign needs, but at the product level there are a number of products that are compatible with foreign market import requirements: footwear, clothing, coffee, fish and crustaceans. Emerging exports are less compatible with foreign market import requirements, but there are some products that are highly compatible with foreign market needs, such as thermionic valves and transistors for electronic instruments. There are others, however, that do not target significant market needs, such as decorative wood, candles and matches, and ores and concentrates. The next section examines these products in greater detail.

Table 3.2
Trade Compatibility Indices of Vietnam

	ASEAN-5	China	European Union	United States
All Products, *of which*	0.26	0.31	0.45	0.49
within group compatibility:				
Large-Size	0.47	0.41	0.66	0.65
Medium-Size	0.49	0.42	0.67	0.74
Small-Size	0.54	0.73	0.67	0.77
Emerging Exports	0.13	0.25	0.41	0.27

Note: Sub-indices do not sum to total because of differences in market share trade weights. See text for methodology and definitions of export categories by size.

C. Trade Complementarities in Product Markets

Vietnam's ability to affect its market position based on the competitiveness of its products in regional and country-specific markets has been measured by the trend growth rate of product exports in the four product categories and the ratio of product exports relative to market imports of those products. The competitiveness of firms and industries in the world market and that of the selected regional and country-specific markets in particular are reflected in high rates of export growth and rising market shares. Following the approach used by the World Bank and others (TradeCan, 2000), the export performance of Vietnam has been classified into the following four categories:

- Dynamic products: Products in which Vietnam has a rising market share and foreign market imports are expanding.
- Stagnant products: Products in which Vietnam has a rising market share but foreign market imports are contracting.
- Missed Opportunities: Products in which Vietnam has a falling market share despite expanding foreign market imports.
- Retreat: Products in which Vietnam's market share is falling and foreign market imports are contracting.

Table 3.3 show the classification of Vietnam's exports into the four categories in the world market, while Tables 3.4 and 3.5 show the classification of Vietnam's exports to China and the United States market respectively. Clearly, the most desirable products for Vietnam are the *dynamic products* and *missed opportunity* products, and one-half of Vietnam's exports in our sample fall within these two categories.[6] In the world market, Vietnam's dynamic products include insulated cable wire, furniture, petroleum, clothing accessories, nitrogen functional components, telecommunication equipment and electrical circuits. During the sample period, the products with falling market shares and declining foreign market imports included rice, coal, wood manufactures and fabrics. In the Chinese market, the situation is somewhat different. Vietnam's dynamic products in that market included footwear, clothing accessories, furniture, nitrogen functional

Table 3.3
Vietnam's Exports and Their World Market Performance

	World Market	
Vietnam	**Expanding**	**Contracting**
Fast-Growing Exports	***Large:*** Insulated wire and cable Clothing accessories of textile, not knitted Fish in airtight containers Furniture Petroleum, crude & partly refined ***Medium:*** Nitrogen function compounds Telecommunications equipment Apparatus for electrical circuits Electric power machinery Children's toys, indoor games Pepper & pimento Articles of artificial plastic materials ***Small:*** Pumps and centrifuges Electrical machinery and apparatus Diamonds, not industrial Headgear ***Emerging:*** Candles, matches, smokers requisites Works of art, collectors pieces Thermionic valves and tubes, transistors	***Large:*** Crustacean and mollusks Footwear ***Medium:*** Bicycles and other non-motorized cycles Edible nuts Ornaments of ceramic materials ***Small:*** Sewing machines Articles of ceramic materials Gold silver plated jewelry Basketwork and articles of plaiting materials ***Emerging:*** Bags and sacks of textile materials Food preparations Small wares and toilet articles Ores and concentrates of non-ferrous base metals
Slow or Negative Growing Exports	***Large:*** Clothing and accessories, knitted or crocheted ***Medium:*** Made up articles of textile materials Coal /anthracite, bituminous/ ***Small:*** Special transactions Parts and accessories of machinery ***Emerging:*** Tarpaulins, tents, awnings, sails, etc. Tea Manufactured articles of wood	***Large:*** Fish, fresh, chilled or frozen Clothing of text fabric, not knitted crocheted Travel goods, handbags and similar articles Natural rubber and similar natural gums Coffee, green or roasted Rice, glazed or polished ***Medium:*** (none) ***Small:*** Vegetable products Apparel and clothing accessories of leather Wood simply shaped or worked ***Emerging:*** Yarn and thread of synthetic fibers Fabrics or woven of synthetic fibers Manufactures of wood for domestic use

[6] The trend growth rate was calculated from the log-linear estimate of the fitted trend.

Table 3.4
Vietnam's Exports and Their Chinese Market Performance

	China Imports	
Vietnam	**Expanding**	**Contracting**
Fast-Growing Exports	***Large:*** Insulated wire and cable Footwear Clothing accessories of textiles, not knitted Fish in airtight containers Furniture Petroleum, crude and partly refined Crustaceans & mollusks, fresh, chilled, salted, dried ***Medium:*** Nitrogen function compounds Telecommunications equipment Apparatus for electrical circuits Electric power machinery Edible nuts, fresh or dried Pepper & pimento Articles of artif.plastic materials ***Small:*** Pumps and centrifuges Articles of ceramic materials Electrical machinery and apparatus Basketwork and articles of plaiting materials Diamonds, not industrial Headgear ***Emerging:*** Small wares and toilet articles Food preparations Thermionic valves and tubes, transistors	***Large:*** (none) ***Medium:*** Bicycles and other cycles, not motorized Ornaments of ceramic materials Children's toys, indoor games ***Small:*** Gold silver plated jewelry Sewing machines ***Emerging:*** Bags and sacks of textile materials Works of art, collectors pieces Candles, matches, smokers requisites Ores and concentrates of non-ferrous base
Slow or Negative Growing Exports	***Large:*** Clothing and accessories, knitted or crocheted ***Medium:*** (none) ***Small:*** Wood simply shaped or worked Special transactions Parts and accessories of machinery ***Emerging:*** Tea Yarn and thread of synthetic fibers Manufactured articles of wood	***Large:*** Fish, fresh, chilled or frozen Clothing of text fabric, not knitted Travel goods, handbags and similar articles Natural rubber and similar natural gums Coffee, green or roasted Rice, glazed or polished, not further prepared ***Medium:*** Made up articles of textile materials Coal, anthracite, bituminous ***Small:*** Vegetable products, chiefly for human food Apparel and clothing accessories of leather ***Emerging:*** Tarpaulins, tents, awnings, sails Manuf.of wood for domestic or decorative use Fabrics, woven, of synthetic fibers

components, and electrical circuit apparatus. In the US market, Vietnam's dynamic exports include a wide-ranging array of products: insulated wire and cable, clothing accessories, fish, furniture, nitrogen functional components, telecommunications equipment, articles of ceramic, electrical machinery, bags of textile materials, and works of art.

Table 3.5
Vietnam's Exports and Their US Market Performance

	United States Imports	
Vietnam	**Expanding**	**Contracting**
Fast-Growing Exports	***Large:*** Insulated wire and cable Footwear Clothing accessories of text., not knitted Fish, in airtight containers Furniture Petroleum, crude and partly refined Crustaceans and mollusks, fresh, chilled ***Medium:*** Bicycles and other cycles, not motorized, and parts Nitrogen function compounds Telecommunications equipment Apparatus for electrical circuits Electric power machinery Children's toys, indoor games. Edible nuts, fresh or dried Pepper and pimento, whether or not ground Articles of artif. plastic materials. ***Small:*** Pumps and centrifuges Gold silver plat. jewelry ex watchcases Articles of ceramic materials Electrical machinery and apparatus Basketwork and art. Of plaiting materials Diamonds, not industrial, not set or strung Headgear ***Emerging:*** Bags and sacks of textile materials Small wares and toilet articles Candles, matches, smokers requisites Works of art, collectors pieces Food preparations. Thermionic valves and tubes, transistors.	***Large:*** (none) ***Medium:*** Ornaments of ceramic materials ***Small:*** Sewing machinery ***Emerging:*** Ores and concentrates of non ferrous base met.
Negative Growing Exports	***Large:*** Fish, fresh, chilled or frozen Clothing of text fabric, not knitted crocheted Travel goods, handbags and similar articles Clothing and accessories, knitted or crocheted Rice, glazed or polished, not further prepared ***Medium:*** Made up articles of textile materials Coal /anthracite, bituminous/ ***Small:*** Apparel and clothing accessories of leather Special transactions Parts and accessories of machinery ***Emerging:*** Tarpaulins, tents, awnings, sails. Tea Yarn and thread of synthetic fibers Manufactured articles of wood Manuf. of wood for domestic or decorative use Fabrics, woven, of synthetic fibers	***Large:*** Natural rubber and similar natural gums Coffee, green or roasted ***Medium:*** (none) ***Small:*** Vegetable products, chiefly for human food Wood simply shaped or worked ***Emerging:*** (none)

Chapter 4: Micro Determinants of Competitiveness

Vietnam's export competitiveness is based on three broad categories: (a) labor and utility costs, (b) trade policies affecting export incentives, domestic trade barriers, and foreign market access, and (c) exchange rate policies.[7] We examine the first two of these categories in this chapter, and cover exchange rate policies in the next one. Our initial assessment is based on the World Bank's *World Development Indicators* for the competitiveness of firms and industries in Vietnam and the other Asian countries (Table 4.1). The data are for the mid-1990s and provide a benchmark for the more recent data available from the ASEAN Secretariat (ASEAN Secretariat, 2000) presented in the sections that follow. The information provides insight into Vietnam's competitiveness

Table 4.1
Comparative Physical and Human Capital Indicators of Vietnam and ASEAN-5 and China

	Vietnam	Indonesia	Malaysia	Philippines	Singapore	Thailand	China
Information and Communication Network							
Phone Lines (Number per 1000 people) b/	16	21	183	25	513	70	45
Phone Faults (Number per 100 lines) e/	N/A	49	78	10	11	32	N/A
Waiting Time for a Line (Years) b/	1.5	0.2	0.4	2.9	0	1.2	0.1
Average Price per Call (US$ per 3 minutes call) b/	N/A	6.1	6.0	6.2	4.0	7.3	N/A
Televisions (Number per 1000 people) b/	180	232	228	125	362	167	252
Internet Hosts (Number per 1000 people) a/	0	0.5	19.3	0.6	196	2.1	0.2
Personal Computers (Number per 1000 people) b/	3.3	4.8	42.8	9.3	217	16.7	3
Fax Machines (Number per 1000 people) c/	0.2	0.4	5.0	0.7	25	1.7	0.2
Newspaper Circulation (newspapers per 1000 people) d/	8	20	124	65	364	48	23
Physical Infrastructure							
Paved Road Density (Km of road per million people) c/	368	870	3500	N/A	1015	1027	815
Air City Pairs c/	118	169	208	230	300	259	166
Electric Power System Losses (% of total power output) c/	22%	12%	10%	16%	4%	10%	6%
Human Capital							
Literacy Rate (%) c/	94%	84%	83%	95%	91%	94%	81%
Growth in Literacy Rate c/	N/A	56%	38%	14%	N/A	19%	N/A
Primary School Enroll. (% of school-aged children) c/	114%	114%	91%	116%	104%	87%	118%
Secondary School Enroll. (% of school-aged children) c/	47%	48%	61%	79%	62%	55%	67%
Tertiary School Enroll. (% of school-aged children) c/	4%	11%	11%	27%	34%	20%	5%
Secondary Technical Enroll. (% sec.enroll.) Average c/	6%	12%	2%	N/A	N/A	19%	9%
Life Expectancy at Birth (Years) b/	68	65	72	66	76	69	70
Growth in Life Expectancy (%) b/	8%	18%	7%	8%	7%	10%	4%

a/ Comparative data for 1997
b/ Comparative data for 1996
c/ Comparative data for 1995
d/ Comparative data for 1994
e/ Comparative data for 1992
Source: World Bank, *Competitiveness Indicators (*Available http://wbln0018.worldbank.org/psd/compete.nsf)

[7] The World Bank also categorizes competitiveness into (a) overall performance, (b) macroeconomic and market dynamism, (c) financial dynamism, (d) infrastructure and investment climate, and (e) human resources. See http://fpsi.worldbank.org/fpsiweb/frame/compet.html.

relative to other countries in the region for three broad indicator categories: information and communication, infrastructure and human resources. In all three categories, it is apparent that Vietnam was not competitiveness relative to the ASEAN-5 and China during the 1990s. The exceptions were mainly in the early educational formation of people and the consequent widespread literacy rate of the population. Advanced education and technical training were much less widespread relative to other countries in the region.

A. Comparative Production Costs

Production costs in Vietnam are increasingly converging with those of other Southeast Asian countries. The sharp devaluation of the Thai and Indonesian currencies relative to that of Vietnam since late 1997 has narrowed earlier cost differentials, making it all the more difficult for Vietnam to attract new foreign investment from the ASEAN-4 (Indonesia, Malaysia, Philippines and Thailand). Vietnam's labor costs nevertheless remain low. The minimum wage is similar to that of Indonesia but substantially below that of Thailand. Accountants and secretaries receive about the same as those in Thailand, but they receive much less than those of Malaysia and the Philippines, while salaries of

Table 4.2
Production Costs of Vietnam and ASEAN-4

			Vietnam	Indonesia	Malaysia	Phillipines	Thailand
Labor Costs	(US$/month)	Minimum wage	$34 - $44	$23 - $47			$103 - $128
		Manager	$99 - $467		$2,069 - $3,844	$2,104	$1,057
		Accountant	$141 - $282		$1,298 - $2,523	$426	$277
		Secretary	$141 - $282		$299 - $623	$396	$277
		Office clerk	$99 - $141		$165 - $336		
		Driver	$71 - $176		$167 - $341	$244	$291
Electricity Rate for Industry	($US per kWh)	Small firm use	Less than 50 KWh= $0.035	Low tension =$0.016-$0.02	Low tension = $0.068	Industrial = $0.09 - $0.11	Less than 30 kW = $0.027-$0.06
		Medium-size firm	50-300kW= $0.071	Medium Tension = $0.018-$0.022	Medium Tension = $0.052		30-2,000kW = $0.025-$0.047
		Large firm use	Over 300= $0.099	High tension = $0.0182	High tension = $0.055		Over 2,000kW = $0.025-$0.016
Water Rate for Industry	(US$/$m^3$)	Industrial	$0.22 - $0.32	$0.21-$0.66	$0.14 - $0.47	$0.09 - $0.13	$0.16 - $0.52
Fuel Costs	(US$/liter)	Industrial	$0.34 - $0.36	$0.20 - $0.24	$0.17 - $0.29	$0.28 - $0.39	$0.18 - $0.19
Telephone Installation / Monthly Cost	(US$/month)	Industrial	$110 / $8.9	$133 / $4.5	$5.26-9.21/month	$131 / $13	$88 / $75

Notes:
(1) All costs are for 2000; local currency costs converted to US dollars based on average exchange rate for 2000.
(2) Labor costs for Vietnam: minimum wage in foreign investment enterprises. Minimum wage maximum in Hanoi and Ho Chi Minh; minimum in other districts.
(3) Electricity costs for Vietnam: industrial rates for normal hour use.
(4) Fuel costs for Vietnam refer to ceiling price.

drivers are in line with those of the ASEAN-4. The salary of Vietnamese workers with foreign companies is high since it is often linked to the US dollar, even though they are paid in Vietnamese dong.

Utility costs vary considerable among the Southeast Asian countries, and they are generally high in Vietnam. Electricity costs are higher than those of the ASEAN-4, and water rates are higher than in the Philippines, and about the same as those of Indonesia, Malaysia and Thailand. Fuel costs are consistently higher than in other countries of the region, while telecommunication costs are about the same. Informal discussions with businesses operating in the Vietnam indicate that, in addition to high costs for basic services and utilities such as electricity, water and air transport, there are also high costs for information, especially as it relates to export market opportunities and financing opportunities. These discussions also suggest that there is insufficient technology transfer, especially to small and medium size companies, high freight costs and inadequate sources of finance and telecommunications services.

B. Export Incentives

Duty Drawbacks and Bonded Warehouses: In an effort to promote exports, a duty drawback on imported inputs is provided for export enterprises. All imported goods to be stored in licensed or approved warehouses. Goods are allowed temporary storage without payment of duty and taxes up to a period of three years. Goods removed from those warehouses for domestic use are liable for payment of import duties and taxes according to normal rates. Exemption from payment of import duties and taxes are given for goods that are re-exported or sold to organizations or individuals exercising duty exemption facilities. Export-oriented businesses do not always avail themselves of these incentives. Informal discussions suggest that administrative and bureaucratic obstacles remain an important barrier to their use.

Export Credit Facility: In an effort to promote Vietnam's private sector, the Government has examined the creation of an export credit facilities (World Bank, 2000). This type of credit facility provides exporters with confidence in exploring and penetrating new markets as well as obtaining new customers in existing markets. Additionally, it enables exporters to offer their customers with more favorable terms of payment. Three types of credit-facilities are proposed to supplement the current situation, while the three-year bank reform program tries to reorient and restructure banks to lend more to the private sector. These include a general credit facility for all private firms, an export credit facility for private exporters and a credit-guarantee facility for private SMEs. The promotion agencies proposed under the program include an SME-promotion agency and a technical center for supporting those private firms that require help in examining or adopting technology for its operations.

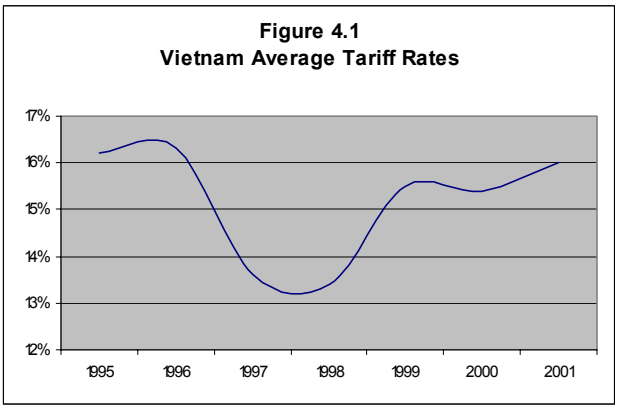
Foreign Exchange Controls: Beginning in 1998, all enterprises were required to deposit 80 percent of their foreign exchange into their account at credit institutions that were allowed to do business with foreign currency. The State Bank lowered the foreign exchange surrender requirement to 50 percent in August 1999, and then to 40 percent in April 2001. The aim is to completely eliminate these surrender requirements.

Table 4.3
Summary of Vietnam's Export Incentives

Incentive	
Export Credit Facilities	The Government has examined the creation of credit facilities and of promotion agencies to support the private sector.
Duty Drawback Schemes	Duty drawback on imported inputs is provided for export enterprises.
Export Processing Zones	Provided for under the Foreign Investment Law.
Foreign Exchange Controls	State Bank currently requires that all enterprises deposit 40 percent of their foreign exchange into their account at credit institutions that are allowed to do business with foreign currency.

Export Processing Zones: The Foreign Investment Law of 1996 and the implementing regulations establish tax incentives for foreign investors provide for EPZs. The provincial authorities issue investment licenses (except for some investments in oil and gas, telecommunications, and construction sectors). A separate regulation governs the granting of tax incentives in industrial zones and export processing zones. At the provincial level, special incentives are already being provided to investors, beyond those allowed by the central government in an effort to stimulate investment. There is nevertheless considerable room for improving the effectiveness of investment incentives and regulations in general to encourages private investment and increases the productivity of the private sector by streamlining and facilitating investment procedures. The most serious problem in the process of approval is the overlapping authority of local government, mainly at the provincial level, with that of the national level.

C. Nominal and Effective Rates of Protection



Vietnam's tariffs have been reduced a number of times, though the average rate has remained high and continues to largely reflect the Government's protectionist strategy (Figure 4.1 and Table 4.4). While the 16 percent unweighted average of the schedule appears moderate, a number of products are highly protected (for details, see Table 4.5). For example, excluding alcoholic beverages that are taxed as high as 120 percent, the average tariff applied to meat and fish (HS Chapter 16) and fruits and vegetables (HS 20) is 50 percent. The dispersion of the nominal tariff rates as measured by the standard deviation is 19, which still indicates a non-uniform tariff structure. The relatively high dispersion also suggests the existence of large variations in effective rates of protection across industries, and consequently the preference afforded to some industries over others. All import tariffs are calculated on the CIF (cost, insurance and freight) value of imports at delivery, which is converted to Vietnamese dong at the exchange rates published by the State Bank of Vietnam on the date of declaration. Customs duties are payable either in cash or by a certified check drawn on a local bank.

Table 4.4
Characteristics of Vietnam's Tariff Structure

- Current version in use: December 2001
- Number of tariff lines: 6,291
- Number of official rates a/: 14
- Unweighted average: 16%
- Maximum tariff: 120%
- Minimum tariff: 0%
- Dispersion: 19 b/
- Tariff peaks
- Tariff escalation
- Anti-export bias

a/ Bands include the following rates: 0,3,5,10,15,20, 30,40,50,60,80,100,120.
b/ Measured by the standard deviation.

Multiple bands and few items in certain bands indicate that higher protection is being afforded to certain sectors rather than others. Figure 4.2 shows the distribution of tariff lines across the various bands in the Vietnamese schedule. Other than products with a zero tariff rate, the most common rates are between 1 and 5 percent (applied to nearly 20 percent of all tariff lines). The authorities apply 40, 30, and 10 to 15 percent taxes

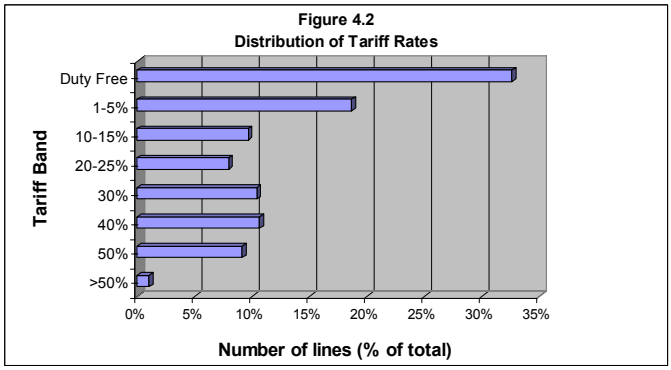


Table 4.5
Vietnam's MFN Tariffs

HS Section		Number of Tariff Lines	Minimum Rate	Maximum Rate	Average Rate	Standard Deviation
I	Live animal, animal products	220	0	30	20.6	10.8
II	Vegetable products	316	11	72	19.7	15.3
III	Animal or vegetable fats and oils	79	3	40	18.6	16.5
IV	Prepared foodstuffs, beverages and spirits, tobacco	232	10	49	45.2	29.0
V	Mineral products	171	35	84	5.4	8.1
VI	Chemicals	999	10	328	5.2	10.5
VII	Plastic and rubber products	317	104	213	10.0	13.2
VIII	Raw hides and skins, leather and leather products, travel goods, handbags	77	20	34	14.1	17.8
IX	Wood and wood articles, cork and cork articles, manufactures of straw, basketware and wickerwork	89	7	74	12.6	14.2
X	Pulp of wood, paper and paperboard articles	192	20	145	17.4	15.3
XI	Textiles and textile articles	853	131	18	34.7	16.6
XII	Footwear, headgear, umbrellas, prepared feathers, artificial flowers, articles of human hair	60	7	32	38.9	14.2
XIII	Articles of stone, plaster, cement; ceramics; glassware	176	29	89	20.7	17.5
XIV	Pearls, precious or semi-precious stones, precious metals, imitiation jewelry, coins	53	1	40	12.2	17.6
XV	Base metal and articles	698	0	215	9.6	12.9
XVI	Machinery and mechanical appliances, electrical equipment, sound recorders, televisions	1116	437	679	9.4	13.7
XVII	Vehicles, aircraft, vessels and transport equipment	191	19	125	27.2	35.3
XVIII	Optical, photographic, measuring, medical and surgical instruments, clocks and watches, musical instruments	268	23	187	9.1	14.1
XIX	Arms and ammunition, parts and accessories	23	0	40	9.3	15.8
XX	Miscellaneous manufactured articles	154	44	56	25.4	15.9
XXI	Works or art, antiques	7	0	20	4.3	7.3
I-XXI	All products	6291	0	120	16.3	19.4

Note: Based on December 2001 tariff schedule provided by Vietnam Customs Department.

each to approximately 10 percent of tariff lines, while it applies a 50 percent import tax to 9 percent of tariff lines. A small number of products are taxed at 1 percent. It seems logical that the rates should be collapsed to simplify the tariff structure and make it more rational.

Escalation exists in Vietnam's tariff structure, with considerably lower tariffs applied to inputs than to intermediate and final goods. Moreover, tariff peaks are applied to areas where the local industry can supply semi-finished or finished products. In the passenger motor vehicle section of the tariff schedule, tariffs are more than seven times higher than the average rate for Vietnam, and in the prepared meats section they are about three times

Table 4.6
Vietnam: Industry-Level Effective Rates of Protection

	Effective Rate of Protection		
	For Export Production	For Import-Substitution	
	Fukase and Martin (1999)		Institute of Economics (1999)
Wearing apparel	-231.9	229.8	133.8
Textiles	-138.0	115.0	66.5
Vegetable oils fats	-98.5	1.4	21.7
Paper products	-88.5	88.1	59.5
Leather products	-67.1	-15.1	34.8
Food products	-48.3	59.6	231.1
Fishing	-45.7	66.6	19.6
Transport equipment	-32.9	56.6	174.8
Ferrous metals	-25.3	3.7	20.4
Forestry	-22.9	-20.5	4.4
Coal	-22.2	-14.4	3.3
Wood products	-19.3	15.2	54.5
Electronic equipment	-18.4	13.8	30.4
Oil	-15.9	-13.9	3.2
Gas	-13.3	24.5	17.6
Dairy products	-5.7	16.3	36.6
Meat products	-5.4	43.3	71.1
Sugar cane, sugar t	-3.8	9.7	-0.7
Paddy rice	-3.8	4.2	5.2

higher than the average rate. The recent introduction of a new import-export mechanism for the 2001-2005 period has helped to facilitate market access.[8]

Nevertheless, Vietnam's continued use of tariff escalation by stages of production reinforces import-substitution policies and favors the least beneficial kinds of production that have little value added for the economy. We can measure this type of protection through the calculation of effective rates of protection (ERPs). In contrast to the nominal rate of protection (NRP) that measures the extent of protection by the difference between the border price of foreign-made products and the price of domestic import-substitutes made by local producers, the ERP measures the increase in value-added of the protected industry over value added of that same industry measured in terms of border prices. For an industry or firm, the value added is the difference between the total value of output and the cost of the intermediate inputs used in the production of the final product.[9]

The ERP brings out both the effect of an escalating tariff structure and an industry's value added in determining the effect of protection. Non-uniform tariffs affect the decisions of investment and production, the allocation of resources, and the distribution

[8] Decision No.46/2001/QD-TTg on the Management of Import and Export in the Period 2001-2005, issued by the Prime Minister on April 4, 2001.

[9] Calculation of the ERP is based on the measurement of the difference between the observed value added with the existing tariff structure and that estimated for the industry under free trade. The value added under free trade is calculated by deducting from the observed value added the revenue equivalent of the tariff on the industry's output and the cost equivalent of the tariffs affecting intermediate inputs used in production. Specifically, the ERP for a product is the percentage excess of domestic value added, V, over the international market value added, W, would have been realized in the absence of the existing tariff structure. The difference between V and W, expressed as a percentage of W is the ERP, i.e. ERP = (V - W) / W.

of income-earning capacity. Differences in tariff rates may increase or decrease the amount of value-added in certain lines of production, depending upon the structure of the tariff differences. Thus, while nominal tariffs determine trade levels through their relation to product prices, the ERP determines profit, resource allocation and the productive structure of the economy through its relation to value added of production.

For Vietnam the extent to which production for exports are discouraged in favor of servicing the domestic market can be derived from ERP calculations that measure the magnitude of import-substitution policies, and those that measure the extent to which those same policies create an anti-export bias. To measure effective protection rates, we use the estimates provided by Fukase and Martin (1999) and the Institute of Economics (1999).

Fukase and Martin (1999) based their ERP calculations on the tariff schedule for 1998 and the input-output (I-O) table information from the GTAP Version 4 database. The Institute of Economics based their calculations on the 1997 tariff schedule and a modified version of the 1994 I-O table for Vietnam, as well as a more recent 1996 I-O table. Both studies calculated the ERP used to protect domestic industries from import competition and, as such, represent import-substitution policies. Table 4.7 presents the calculations for those industries covered by both studies.[10] The results underscore the considerable variations in the magnitude and ranking of the ERPs when different tariff schedules and different sets of data are used for the input-output coefficients in the calculations. Notwithstanding these technical qualifications, the results are suggestive of the extent to which the tariff schedule favors some industries relative to free trade. The resource misallocation that results from investors expanding output in the protected sectors may be substantial in the Vietnamese economy.

For Vietnam's export competitiveness, tariffs on tradable inputs used in export-oriented industries can create an anti-export bias. Those industries attempting to export rather than sell in the domestic market receive no output tariff protection but must nevertheless pay the protected input costs of tradable inputs. Column 2 of Table 4.7 presents the calculations of ERP by Fukase and Martin (1999) for producers orienting their production to the export market. The negative effects from the higher costs of inputs are greatest for the textile and apparel industries, vegetable oils and fats, paper products, leather products and fishing and food products. While these duties on inputs are in principle offset by the existing duty-drawback scheme in Vietnam, informal discussions with a number of firms have suggested that administrative obstacles and delays prevent them from using the scheme.

[10] In both studies the negative ERP values for some industries appear because the value-added measured at world prices is negative for these industries. Specifically, valued at prices on world markets these industries used more than US$1 of non-factor inputs to produce US$1 of output.

D. Foreign Market Access

WTO - Vietnam has applied for membership in the WTO and currently has observer status. The Government submitted its application to join the WTO as a developing country at the beginning of `95. A detailed Memorandum on Vietnamese Foreign Trade and Economic Policy was prepared for the WTO Working Party for examination. A number of meetings have taken place between the Government and the Working Party to address questions concerning trade and intellectual property rights. The recent BTA with the United States is lays the foundation for many WTO standards on market access, non-discrimination and transparency (for details, see Burke and Bich Lien, 2001).

CEPT-AFTA Scheme - Trade between Vietnam and other ASEAN member countries is subject to each country's commitments under the Asian Free Trade Area (AFTA). The Common Effective Preferential Tariff (CEPT) is the principal tariff-cutting mechanism for the AFTA and was ratified by the Association of Southeast Asian Nations (ASEAN) member countries in 1993 and implemented one year later.[11] Following a transition period, the agreement establishes a free trade area in which all ASEAN member countries will apply a common tariff to each other's goods, but tariffs with non-ASEAN countries will continue to be individually determined.

The scheme originally aimed to reduce tariffs on all manufactured goods from their 1993 levels to less than 5 percent over a 15-year period. The implementation period was accelerated in 1994, when the transition period was reduced to 10 years. In 1998 the transition period was again accelerated, in this case to 2000 for the original ASEAN members and to 2003 and 2005 for the new ASEAN members. The transition period for Vietnam was extended to 2003. A free trade area would be created in 2018 when the new ASEAN members reduced all tariffs to zero.

The product coverage of reduced tariffs and duty-free access to the AFTA market was originally limited to manufactures, including capital goods and processed agricultural products. Unprocessed agricultural products were originally excluded from the CEPT scheme but later added. The original exclusion of unprocessed agricultural products was mainly due to restrictive domestic policies that were intended to protect domestic producers.[12] Unprocessed agricultural products are treated under three separate lists: (a) Immediate Inclusion List; (b) Temporary Exclusion List (TEL) and (c) Sensitive List. Tariffs of unprocessed agricultural products in the Immediate Inclusion List have been gradually reduced since 1996 and are to be within the 0-5 percent range by 2003. Member countries are also required to eliminate quantitative restrictions (QRs) and other

[11] Currently ASEAN has ten member countries: Thailand, Brunei Darussalam, Indonesia, Malaysia, Philippines and Singapore, which are referred to as the 'original' ASEAN members, and Cambodia, Lao PDR, Myanmar and Viet Nam, which are referred to as the 'new' ASEAN members.

[12] In the context of the CEPT scheme, agricultural products are defined as agricultural raw materials and unprocessed products covered under Chapters 1-24 of the Harmonized System (HS) code, similar agricultural raw materials and unprocessed products in other related HS headings, and products that have undergone simple processing with minimal change in form from the original product.

non-tariff barriers (NTBs) on these products. Unprocessed agricultural products in the Temporary Exclusion List can be kept out of the CEPT Scheme only for a limited time and must be phased in by 2003. Unprocessed agricultural products in the Sensitive List will be included into the CEPT scheme by January 2010.

In addition to tariff cuts, an important part of the CEPT scheme is the elimination of quantitative restrictions such as quotas and licenses, and the reduction and eventual elimination of other NTBs to trade, such as customs surcharges and technical regulations. Unlike the WTO, the CEPT scheme contains no specific agreements that cover sanitary and phytosanitary measures, technical barriers to trade, pre-shipment inspection, customs valuation, and import licensing procedures. Under Articles IV and V of the Protocol on the Special Arrangement for Sensitive and Highly Sensitive Products, adopted in September 1999, a time-line is established for the elimination of all quantitative restrictions and NTBs to trade on sensitive and highly sensitive products. The deadline for Vietnam is 2013 (ASEAN, 2000).

While the categorization of most products executed by many countries appears to comply in large part with CEPT rules, others related to the temporary exemption and sensitive lists are questionable. These lists are often viewed as instruments to avoid opening up regional trade, and to continue the use of protectionist policies for key industries and for trade with non-ASEAN countries. Vietnam's general exception list appears to breach the principle of CEPT since it includes items such as fuels, broadcasting and receiving equipment, switchboards and exchanges, vehicles with less than 16 seats, scraps and used consumer goods. These are all items in which Vietnam has strong protection and revenue objectives. In 1996 these goods accounted for approximately 41 percent of its imports from ASEAN members. Vietnam has nonetheless taken steps to meet its AFTA commitments on tariff reductions, although it has often done so by declaring goods that are already at zero or low rates and it has yet to announce the schedule to reduce tariffs on products included in the general exception list. There have therefore been no significant reductions in protection for Vietnam; in some cases protection has increased in a manner contrary to AFTA commitments and obligations that must be met under WTO accession (Centre for International Economics, 1998).

GSP Arrangements- - The actual tariff rates applied by industrialized countries to products originating from Vietnam and other developing countries are usually less than the MFN rate because of tariff preference schemes like the Generalized System of Preferences (GSP) and other preferential trade arrangements (PTAs). Countries offering the GSP apply low or zero-rate tariffs to certain commodities originating from developing countries eligible for participation in the scheme. The GSP scheme is unilateral, *viz.*, developing countries are not required to extend reciprocal tariff reductions. The program is intended to give preferential tariff treatment to developing countries until their exporters are able to compete on world markets with normal, non-preferential tariffs.[13]

[13]The preferential and unilateral nature of GSP appears to be in violation of several principles of the General Agreement on Tariffs and Trade (GATT), which state that trade must be conducted on a nondiscriminatory (or MFN) basis, that members of the World Trade Organization (WTO) must extend any tariff concessions to all trading partners, and that tariff reductions must be reciprocal. Since 1971, however,

The United States, the European Union, Japan, Australia, offer Vietnam beneficial access to their markets under GSP arrangements. An assessment of the effect of the GSP and other PTAs on the average tariff level applied to developing countries that are eligible beneficiaries is complex because of the variety of schemes that are in place and the fact that goods can be included or excluded from time to time over the life of the program (Michalopolus, 1999). For example, under the current United States GSP, most imports of minerals (HS Section 5) from least-developing countries are eligible for preferences,

Table 4.7
US Tariffs by MFN Rates and Generalized System of Preferences, 2001

			MFN Tariff Rates by Section				GSP	
HS Section/Description		Number of Tariff Lines	Minimum	Maximum	Average a/		Dominant Indicator b/	Share of Tariff Lines
1	Live Animals/Products	737	0%	117%	11%		A+	64%
2	Vegetable Products	648	0%	164%	5%		A+	42%
3	Animal/Vegetable Fats	93	0%	19%	5%		A+	58%
4	Processed Foods/Tobacco	943	0%	350%	13%		A+	43%
5	Mineral Products	211	0%	13%	1%		A+	19%
6	Chemical/Industrial Products	2,078	0%	15%	5%		A+	40%
7	Plastics/Rubber	381	0%	14%	4%		A	56%
8	Animal Hides/Skins	211	0%	20%	6%		A	17%
9	Wood/Wood Articles	205	0%	18%	3%		A	20%
10	Paper/Cellulose Material	223	0%	7%	1%		A	56%
11	Textiles	1,579	0%	33%	10%		A	4%
12	Footwear/Misc. Articles	342	0%	59%	18%			

although most imports of plastic and rubber (HS Section 7) of all GSP beneficiary countries (e.g., developing and least developed) are eligible for GSP preferences (Table 4.x). Moreover, it is clear that recent patterns in world trade are diminishing the intended effects of the GSP. As multilateral trade agreements reduce tariffs worldwide, the margin between the GSP preferential rates and MFN rates becomes smaller. Moreover, the growing number and size of other preferential tariff arrangements are also diminishing the value of tariff relief under GSP.[14]

U.S.-Vietnam Bilateral Trade Agreement – The U.S.-Vietnam Bilateral Trade Agreement (BTA) was implemented by the U.S. Senate in October 2001 and ratified by Vietnam's National Assembly the following month. The BTA commits Vietnam to broad economic reform, including substantial reductions in tariffs; transparency in government procurement; uniform implementation of standards, taxes, and dispute resolution; removal of quotas; market access rights; elimination of trade-related investment restrictions; and acceptance of World Trade Organization (WTO) rules on customs valuation, intellectual property rights, and trade in services. The United States has committed to granting Vietnam Normal Trade Relations status, which will provide Vietnam's exporters with Most-Favored-Nation (MFN) status in the U.S. market, and stimulate U.S. companies to invest in Vietnam. The major impact of the BTA is likely to be on Vietnam's exports. Using the Global Trade Analysis (GTAP) model, Fukase and Martin (2000) found that increased market access to the United States will brings significant welfare gains to Vietnam. The direct terms of trade improvement resulting from increased market access accounts for 60 percent of the total gain, with the remaining 40 percent derived from gains in efficiency. Vietnam's exports to the U.S. market are expected to double in the first year of MFN status, with the largest increases occurring in seafood, textiles, footwear and agricultural products.

[14] MFN tariff rates nonetheless serve as a base with which to assess duty on imports and to compare tariff rates under various PTAs. The United States MFN tariff schedule is comprised of nearly 14,000 tariff lines having an unweighted average of 6 percent. The highest average tariff of 18 percent appears in footwear (HS Section 12); the lowest average of 0 percent appears in art and antiques (HS Section 21). The schedule is also characterized by having a minimum tariff of 0 percent, which is applied to certain products in all HS sections and a maximum tariff of 350 percent, which is applied to certain processed foods and tobacco products (HS Section 4). Products defined in the 'other' category (HS Section 99) make up more than 10 percent of the tariff lines and are assessed prohibitive tariffs. Many of these so-called sensitive products are excluded from preferential agreements, as for example those with Israel, Mexico and Canada that include certain types of textiles and related products.

Chapter 5: Macro Determinants of Competitiveness

A. Real Exchange Rate Measures

Vietnam has sought to strengthen its macroeconomic competitiveness by shifting from a pegged exchange rate system to a crawling peg in an effort to allow the dong to US dollar exchange rate to adjust gradually. Before the adoption of a crawling peg in 1999, the State Bank maintained a pegged exchange rate system. The nominal exchange rate was fairly stable until early 1997 under a managed float, but the dong was devalued by 16 percent during the Asian Crisis to maintain its competitiveness with neighboring countries. Despite the 20 percent fall in the value of the dong during 1997-98 and the adoption of a crawling peg in February 1999, there are still concerns that the lack of sufficient a large interbank market has prevented the dong from adjusting to changed market conditions, and consequently undermined Vietnam's export competitiveness.

The international competitiveness of Vietnam is generally reflected in the real effective exchange rate (REER), which takes into account both general price movements in Vietnam relative to that of each of its trading partners, and the cross exchange rate between Vietnam and each of its trading partners. The real exchange rate is a measure of the relative price of non-tradables to tradables and, as such, it measures the cost of producing a good domestically. A relative price rise, for example, reflects an increase in the domestic cost of producing tradable goods, since it makes production of tradables less profitable and induces resources to move to the non-tradables sector. While the concept is straightforward, its empirical measurement is difficult for a country like Vietnam where price series for tradable and non-tradable products are not readily available.

Two alternative measures of the real exchange rate can be constructed within the context of Vietnam's data limitations. The first uses partner-country and domestic price measured in terms of CPI data to construct a real exchange rate index that represents the ratio between non-tradable and tradable prices. Specifically, the real exchange rate is defined in this case as $e^r_t = P^n_t/P^f_t$, where e^n is the nominal exchange rate, P^f is the foreign currency price of goods purchased abroad, and P is the domestic price level. The second uses purchasing power parity (PPP) definition to correct the nominal exchange rate by the relative price of domestic to foreign prices, as measured by CPI data. Using this approach, the real exchange rate is defined as $e^r_t = (1/e^n)_t P^n_t/P^f_t$, where e^n is the nominal exchange rate, P^f is the foreign currency price of goods purchased abroad, and P is the domestic price level.

A rise in e^r represents a real *revaluation* in a fixed exchange rate system, and an *appreciation* in a flexible exchange rate system, which under the purchasing power definition can be brought about by either a fall in the nominal exchange rate e^n, or a rise in the relative price of domestic goods (equivalent to a relative rise in the price of foreign goods). Conversely, a fall in e^r represents a real *devaluation* under a fixed exchange rate

Table 5.1
Vietnam's Nominal and Real Effective Exchange Rates (1998=100)

	Exchange Rate	Real Effective Exch. Rate	
			REER2
1990	47	63	29
1991	84	52	41
1992	101	73	72
1993	96	101	95
1994	99	104	97
1995	100	100	100
1996	100	118	112
1997	106	125	115
1998	120	127	116
1999	126	118	121
2000	128	123	125
2001	132	124	122

REER1 is the the nominal exchange rate adjusted for inflation of each trading partner.
REER2 is the ratio of partner-country and domestic price measured in terms of CPI.
Note: An increase in the index reflects an appreciation; a fall reflects a depreciation.

system, and a *depreciation* under a flexible exchange rate system. The fall is associated with either a rise in the nominal exchange rate e^n or a rise in relative prices of foreign goods (equivalent to a fall in relative prices of domestic goods). The inverse of the real exchange rate therefore measures export competitiveness, since variations in e^r influence the quantity of goods demanded in the foreign markets relative to competing foreign and domestic suppliers to those markets.

Table 5.1 shows the calculations of Vietnam's real exchange rate index using these two measures. Series REER1 refers to the purchasing power based definition of the double-deflated nominal exchange rate of Vietnam with each of its trading partners, while REER2 refers to the ratio of partner-country and domestic price, measured in terms of the CPI. The CPI for Vietnam's trading partners is derived from the trade-weighted average of its trading partners. The series are similar except in the period during the Asian currency crisis, when efforts were made by the State Bank to control the exchange rate.

B. Real Cross Exchange Rates

Table 5.2 presents the real effective exchange rate of Vietnam at the global and principal market level, measured in terms of the currencies of its major export markets in ASEAN, Japan, the European Union, China and the United States. The appreciation of the dong during the early 1990s caused a structural worsening of the country's trade balance.[15] In more recent years, there has been an increasing convergence of the real cross-rates for the Japan, the European Union and the ASEAN-5 (Indonesia, Malaysia, Philippines, Singapore and Thailand) from their 1995 levels. The real cross-rates for the United States and China, however, have increasingly diverged from these other regions.

[15] Such an imbalance also occurred in other Asian countries because of a significant revaluation of real exchange rates in the region in 1990-96. The loss of competitiveness associated with those relative exchange rate movements has been blamed for the collapse of currencies in 1997-98. According to the so-called misalignment hypothesis, the revaluation of currencies observed in Asia was in part the consequence of the fixed exchange rate regimes and the ensuing capital outflows. This misalignment implied that the current account imbalances were not sustainable and eventually had to be reversed through the process of nominal and real depreciations of currencies that took place beginning in the latter part of 1997.

Table 5.2
Vietnam's Real Effective Exchange Rate and Real Cross-Rates (1995=100)

		Real Cross-Rates				
	World	ASEAN-5 a/	Japan	EU	China	US
1990	63	60	71	79	39	50
1991	52	54	61	50	40	45
1992	73	73	84	68	61	66
1993	101	102	106	105	86	93
1994	104	101	101	104	118	95
1995	100	100	100	100	100	100
1996	118	114	136	117	100	115
1997	125	122	151	126	92	111
1998	127	160	146	114	81	98
1999	118	135	129	120	84	99
2000	123	138	125	138	87	99
2001	124	139	135	133	82	91

a/ ASEAN-5 refers to Indonesia, Malaysia, Philippines, Singapore and Thailand.
Note: An increase in the index reflects an appreciation; a fall reflects a depreciation.

These different movements in the real cross-rate of Vietnam with its major trading partners underscore the diverging trends in the country's overall international competitiveness. In recent year, Vietnam's competitiveness has improved in China and, to a lesser extent, in the United States, while its competitiveness in the ASEAN-5 and the European Union has worsened. The loss of competitiveness in the European market since the mid-1990 is the consequence of the appreciation of the dollar relative to the euro and the close association of the dong with the US dollar. As a result, Vietnamese exporters face a more favorable position in the US and Chinese markets than in ASEAN-5 and Japanese markets. To the extent that foreign market importers are responsive to relative price differences between Vietnam and competing suppliers to those markets, the demand for exports of Vietnam would be more favorable in the US and Chinese markets than in those of the Japan, the EU and the ASEAN-5.

C. Trade and Exchange Rate Transmissions

Differences in Vietnam's international competitiveness in each of its major markets suggest the need for a disaggregated analysis of the exchange rate transmission on exports. In this section we measure the impact of Vietnam's international competitiveness on its exports in each of the major regional markets, as well as the global market. The results of the estimates of the demand for Vietnam's exports are discussed in this section and details of the specification of the export demand relationship are presented in the Technical Appendix.

We begin by specifying the demand for Vietnam's exports as a function of real GDP in the geographic markets and the real exchange rate. When unit price data are available, the real value of exports, or their volume, as specified as a function of both the export prices, P, such that $P = P^e/R$, where P is the US dollar price of the imported product, P^e is the Vietnamese dong price of the imported product, and R is the real effective exchange rate (REER). Since unit prices are not readily available for Vietnam for all exports, we need to specify exports in terms of their US dollar price, and focus on the REER variable. At the bilateral trade level, the real exchange rate is measured by the 'real cross-rate', which takes into account changes in the nominal exchange rate of Vietnam with the foreign country and the relative price levels between Vietnam and that country. It measures

Table 5.3
Regression Results of Vietnam's Export Demand
$\Delta xt = \alpha 0 + \alpha 1(x\text{-}yf)t\text{-}1 + \alpha 2\Delta yft + \alpha 3yft\text{-}1 + \alpha 4\Delta rt + \alpha 5rt\text{-}1 + ut$

						Summary Statistics		
	$\ln(X/Y)_{t-1}$	$Ln(Y)_{t-1}$	$\ln(R_t/R_{t-1})$	$\ln(R)_{t-1}$	Const	R^2	dw	Period
World	-0.83	0.26	-1.78	-1.64	14.6	0.85	2.5	1994-2000
	(1.3)	(0.2)	(0.17	(0.4)				
ASEAN-5	-0.16	1.04	-0.05		2.9	0.99	3.2	1993-2000
	(1.7)	(0.6)	(0.5)					
Japan	-0.06	1.20		-0.08	-2.1	0.85	1.6	1992-2000
	(0.5)	(0.4)		(0.4)				
European Union	-0.14			-0.27	2.2	0.97	1.7	1990-2000
	(11.4)			(5.7)				
United States	-0.72	2.69		-0.29	-18.8	0.99	2.7	1995-2000
	(8.6)	(2.9)		(0.5)				

Notes:
1/ The variables are defined as follows: X is the volume of footwear exports; Y is real GDP (a proxy for capacity utilization); R is the real effective exchange rate, and it measures Vietnam's international competitiveness.

changes in the purchasing power between the domestic and the foreign economy, and it provides an indicator of changes in the international competitiveness of the domestic economy in its ability to purchase more (or less) goods and services per unit of foreign currency.

The effects of changes in the international competitiveness of Vietnam can be measured by extending the first-order stochastic difference equation to include that variable. Transformation of an autoregressive distributed lag into an ECM with a 'differences' formulation of the relative price or exchange rate term nested in the levels form of the equation yields the equation:

$$\Delta x_t = \alpha_o + \alpha_1(x - y)_{t-1} + \alpha_2\Delta y_t + \alpha_3 y_{t-1} + \alpha_4\Delta r_t + \alpha_5 r_{t-1} + v_t \qquad (5.1)$$

where $-1 < \alpha_1 < 0$, $\alpha_2 > 0$, $\alpha_3 > -1$, $\alpha_4 > 0$ and $\alpha_5 > 0$, and where all variables are measured in logarithmic terms.

Our results indicate that the effect of Vietnam's real effective exchange rate on its international competitiveness and export demand are statistically significant in the global market and a number of regional markets. The magnitude of the price competitiveness and income elasticities of demand for Vietnam's exports are shown in Tables 5.3 and 5.4. The long-run

real exchange rate elasticity of demand for exports in the global market is equal to –1.8 in the short run and –2.0 in the long run. In the short run, the competitive price elasticity sranges from -0.1 in the ASEAN-5 market to –0.3 in the US market, while in the long run it ranges from –0.4 in the US market to –1.9 in the EU market.

The results also confirm expectations about the relatively high income elasticities of export demand for Vietnam's exports. It is especially important in the ASEAN-5 market in the long run, as well as the Japanese and US markets. Given the relatively favorable competitive position of exports to those markets in comparison to that of the European Union, this situation would favor exports to those markets.

D. Shadow Exchange Rate

Market distortions influence the domestic price level relative to the border price level, and therefore they affect the extent to which Vietnam's exchange rate is over or under-valued. We measure the degree of boarder distortions on the official exchange rate through the shadow exchange rate (SER), which incorporates into the official exchange

Table 5.5
Shadow Exchange Rate of Vietnam, 1995-2001

	Official Exchange Rate		Shadow Exchange Rate Factor	Shadow Exchange Rate	
	Nominal	Real a/		Nominal	Real a/
1995	11,058	11,058	1.162	12,849	11,058
1996	11,014	13,082	1.163	12,809	11,248
1997	11,702	13,779	1.136	13,294	12,129
1998	13,306	14,092	1.134	15,089	12,427
1999	13,940	13,079	1.155	16,100	11,324
2000	14,182	13,600	1.154	16,366	11,786
2001	14,651	13,553	1.160	16,995	11,684

a/ Real exchange rate as defined in Table 5.2 for REER2 relative to the exchange rate in 1995.

rate the effect of relative price changes arising from commercial policies in the form of tariffs and nontariff barriers to trade and export subsidies and taxes.[16] When tariff distortions are the only distortion to trade, the shadow exchange rate can be approximated by the product of the market exchange rate and the shadow exchange rate factor, calculated as one plus the weighted average tariff rate.[17]

The shadow exchange rate is meant to establish the correct relationship between prices of tradable and nontradable goods. It is, however, subject to a number of interpretations. The present definition does not consider whether the shadow exchange rate is consistent

[16] Other variants of the SER are those that determine the exchange rate that would balance trade (referred to as SER2), and the exchange rate that would balance the current account (referred to as SER3). For estimates of these two shadow exchange rates for Vietnam, see Lord (1998b).

[17] For details on the methodology for calculating the shadow exchange rate, see ADB (1997) and World Bank (1991).

with a trade balance, since its primary use is for project appraisals rather than macroeconomic policy determination. Tradable goods valued at the border price level can be revalued to the domestic price level by multiplying their value by the shadow exchange rate factor and, alternatively, nontradable goods valued at the domestic price level can be revalued to the border price level by multiplying their value by the reciprocal of the shadow exchange rate factor, the product of which is known as the standard conversion factor.

Table 5.5 shows Vietnam's estimated shadow exchange rate. In 2001, for example, the shadow exchange rate for the dong was nearly 17,000 dong per US dollar, in contrast to the official exchange rate of 14,651 dong per US dollar. Hence, the official dong exchange rate was overvalued relative to its shadow exchange rate, and investments using the official exchange rate rather than the shadow exchange rate would have favored projects producing non-tradables relative to projects producing tradable goods. In practice, however, the shadow exchange rate factor should be applied to the equilibrium exchange rate instead of the market exchange rate. If we assume that Vietnam's exchange rate was in equilibrium in 1995, then the tariffs on imports partially offset the sharper rise in prices of domestic goods relative to those of foreign suppliers. As a result, the real appreciation of the dong, taking into account tariff distortions, was less than would otherwise have taken place had those commercial policy distortions not been in place.

Chapter 6: Conclusions

Despite an overall exports expansion averaging about 24 percent in 1999-2000, and an increasingly diversified geographic and commodity composition of exports, the recent downturn of global activity has slowed the growth of exports and made their long-term prospects uncertain. Already weak external demand conditions in Japan, Vietnam's largest market, were exacerbated by the September 11 terrorist attacks, as were economic activity in the trade-dependent economies of Southeast Asia. At the same time, Vietnam's greater openness relative to what it was a decade ago has made its economy more vulnerable to these external demand influences, and raised the importance of its export competitiveness. Yet internally the Government of Vietnam's slow adjustment to changing global economic conditions, the lack of a broad-based private sector, and the inefficiency of state enterprises is undermining Vietnam's competitive position in its major export markets. Favorable macroeconomic conditions for exports from the flexible exchange rate management and stable domestic prices have only partially compensated these structural problems in the economy.

The analysis in this report suggests that macroeconomic and microeconomic factors determining the competitiveness of Vietnam's exports have become increasingly important since the mid-1990s. As the dependency of export-oriented production processes on foreign direct investment for capital and technologies has risen, the importance of micro and macro-economic policies and regulations and institutions affecting the business environment have grown. Vietnam's prospects for export growth largely depends on the ability to attract foreign direct investment and technologies that permit it to use efficient infrastructure and modern methods for the productions of products and services directed at the global marketplace. Yet weak external demand conditions and unfavorable factors affecting Vietnam's international competitiveness could undermine the sustainability of the country's strong export growth prospects. Table 6.1 summarizes the major constraints and proposed policy and institutional reforms needed to remedy these shortcomings.

A fundamental requirement for effective policy-making by the public sector and investment decision-making by the private sector is the availability of detailed and current statistical information. At present, trade data by detailed product and country trading partner classification are difficult to access, and classification problems exist with what data are available. Although data inconsistencies are gradually being reduced, discrepancies still exist between the GSO and other data sources such as that of the United Nations' COMTRADE data reported by partner-trading countries of Vietnam. Improved distribution of trade data, especially that based on that Harmonized System (HS), would greatly improve public and private sector decision-making capabilities.

Vietnam and other Asian countries generally export similar types of products, implying a relatively low level of complementarity opportunities for intra-regional trade within the Southeast Asia region and with China. These similarities are particularly apparent in food and live animals, mineral fuels and wood and cork manufactures among natural resource-

Table 6.1
Proposed Policy, Regulatory and Institutional Reforms

Existing Constraint	Proposed Action	Expected Impact/Benefit
POLICIES:		
Strong export performances in similar product categories as other Southeast Asian economies	Provide cross-border investment incentive to promote joint ventures for export-oriented production and marketing facilities	Develop cross-border production facilities and benefiting from economies of scale, exporters could improve their export performance in the world market
High utility and infrastructural costs undermine competitiveness of companies.	Examine costing policies for infrastructure and utility costs for business activities to bring them in line with other ASEAN countries..	Improvement in microeconomic determinants of competitiveness
Companies do not always use duty drawback schemes because of slow and cumbersome procedures	Make access to foreign inputs through the duty drawback and temporary admission system automatic and eliminate undue delays in receiving drawbacks and exemptions from duties and taxes paid on inputs.	Promote exports, especially for newly emerging and medium-size products.
Foreign exchange surrender requirement of 40 percent creates disincentive to FDI inflows.	Phase out surrender requirements within a specified period of time.	Attract more FDI by making investment conditions more attractive to foreign companies.
Multiple bands and few items in certain bands indicate that preferential treatment is being given to selected industries.	Eliminate nominal tariff dispersion by moving to fewer rates to make incentive structure uniform across industries	Promote exports, especially for newly emerging and medium-size products.
Lack of sufficient a large interbank market has prevented the dong from adjusting to changed market conditions, and consequently undermined Vietnam's export competitiveness	Make the exchange rate system more responsive to changes in domestic and international prices by moving toward a more flexible exchange rate regime.	Enhance export competitiveness and provide a favorable investment climate that encourages capital inflows and technology transfers.
INSTITUTIONAL SUPPORT		
Lack of reliable and readily available product and partner-country trade data for recent years.	General Statistical Office (GSO) to upgrade its reporting system for detailed trade statistics, including Internet-based distribution of information.	Support Government's policy-making and private sector industry-level analysis
Lack of awareness of high trade compatibility of small and medium-size exports with Asian, US and EU markets.	Enhance trade promotion efforts in Ministry of Trade to support emerging exports to Asian, US and EU markets.	Diversification of exports and improved market information system for small and medium size exporters.
Lack of information on products with rapidly expanding imports in Chinese, Japanese, ASEAN, EU and US markets.	Develop market information system for product-specific China, Japan, ASEAN, EU and US markets through Ministry of Trade.	Enhanced ability to adopt technologies to new and emerging exports in high growth product markets.
Investment incentives of export processing zones (EPZs) undermined by overlapping national and provincial government authorities.	Streamlining investment procedures and centralize authority for export processing zones.	Promote greater use of EPZs and thereby stimulate investment and export growth.

intensive products, and among the unskilled labor-intensive products, in footwear and travel goods and handbags, clothing and furniture. The similarity of these exports by Vietnam and other Asian countries suggests that, by developing cross-border production facilities and benefiting from economies of scale, exporters could improve their export performance in the world market. Moreover, the promotion of FDI activities in these activities would help to shift the focus of foreign investors to industries having a sustainable impact on production patterns by changing technologies and improving worker skills.

Vietnam's export competitiveness has been assessed on the basis of production costs, the real exchange rate and trade policies affecting export incentives, domestic trade barriers, and foreign market access. In production costs, Vietnam's unskilled labor costs are low relative to other ASEAN countries, but high utility costs undermine the potential competitiveness of businesses and create a disincentive to foreign investment in Vietnam.

Electricity costs are higher than those of other countries in the region, as are water rates, and fuel costs are especially high when compared to those of other countries in the region. Pricing policies for these utilities should be examined and, to the extent possible, revised to bring costs in line with those of other ASEAN countries.

Tariffs remain generally high and their non-uniform structure has given rise to large variations in effective rates of protection across industries, and consequently preference being afforded to some industries. Vietnam's continued use of tariff escalation by stages of production reinforces import-substitution policies and favors the least beneficial kinds of production that have little value added for the economy. For Vietnam's export competitiveness, tariffs on tradable inputs used in export-oriented industries can create an anti-export bias. Those industries attempting to export rather than sell in the domestic market receive no output tariff protection but must nevertheless pay the protected input costs of tradable inputs. The negative effects from the higher costs of inputs are greatest for the textile and apparel industries, vegetable oils and fats, paper products, leather products and fishing and food products. Although duties on inputs are in principle offset by the existing duty-drawback scheme in Vietnam, administrative obstacles and delays discourage use of the facility.

While real exchange rate movements in recent years would generally suggest a modest deterioration in Vietnam's international competitiveness, a more appropriate indicator of competitiveness is the real cross-rates of Vietnam with its major trading partners. Using this indicator, we find that Vietnam's competitiveness in the last few years has improved in the Chinese market and, to a lesser extent, in that of the United States, while its competitiveness in the markets of ASEAN, Japan and the European Union has worsened. The loss of competitiveness in the European market is the consequence of the appreciation of the dollar relative to the euro and the close association of the dong with the US dollar.

To the extent that foreign market importers are responsive to relative price differences between Vietnam and competing suppliers to those markets, the demand for exports of Vietnam would be more favorable in the US and Chinese markets than in those of the Japan, the EU and the ASEAN-5. Our results confirm expectations about the relatively high income-elasticities of export demand for Vietnam's exports and, as such, the more favorable demand likely to exist in the US and Chinese markets for exports of Vietnam than that in the Japanese, EU and ASEAN-5 markets. From a policy perspective, the long-term sustainability of Vietnam's international competitiveness associated with real exchange rate movements will depend on the Government's ability to maintain tight monetary and fiscal policies that ensure low inflation and prevent any further erosion in Vietnam's export competitiveness.

Methodological Appendix

A. Modeling Trade and Exchange Rate Movements

The estimates of the relationships for domestic consumption, foreign import demand and Vietnam's export demand follow a sequence of steps to (a) identify the characteristics of each series, (b) specify the parsimonious model used to characterize the data-generating process, and (c) estimate the model. This section describes the steps needed to identify the characteristics of each series and, where appropriate, to model their relationship to one another.

Step 1: Unit Root Tests

An economic relationship generally refers to a state where there is no inherent tendency to change. Such a relationship is, for example, described by the export demand relationship of the log linear form $x_i = \beta y_j$, where export changes in country i are related to changes in the economic activity of a foreign market j. In practice, however, an equilibrium relationship is seldom observed, so that measures of the observed relationship between x_i and y_j include both the equilibrium state and the discrepancy between the outcome and the postulated equilibrium. The discrepancy, denoted d, cannot have a tendency to grow systematically over time, nor is there any systematic tendency for the discrepancy to diminish in a real economic system since short-term disturbances are a continuous occurrence. The discrepancy is therefore said to be stationary insofar as over a finite period of time it has a mean of zero.

Individual time series that are themselves stationary are statistically related to each other, regardless of whether there exists a true equilibrium relationship. Thus, before estimating the export demand for Vietnam's goods, it is useful to determine whether the data generating process of each of the series is itself stationary. Since economic activity variables have a tendency to grow (positively or negatively) over time, the variables themselves cannot be stationary, but changes in those series might be stationary. Series that are integrated of the same order, however, are said to be cointegrated and to have a long-run equilibrium relationship.[18] For trending variables that are themselves non-stationary, but can be made stationary by being differenced exactly k times, then the linear combination of any two of those series will itself be stationary. It is therefore important to test the order of integration of the key series in the model.

Tests for stationarity are derived from the regression of the changes in a variable against the lagged level of that variable. Consider the following simple levels regression:

[18] A series is said to be integrated of order k, denoted I(k), if the series needs to be difference k times to form a stationary series. Thus, for example, a trending series that is I(1) needs to be differenced one time to achieve stationarity.

$$y_t = a + by_{t-1} + d \qquad (A.1)$$

where *a* and *b* are constants and *d* is an error term. y is a stationary series if -1< *b* <1. If =1, y is a non-stationary series and is instead a random walk with drift; if the absolute value of *b* is greater than one, the series is explosive.

By subtracting y_{t-1} from both sides, we obtain

$$\Delta y_t = a + (b-1)y_{t-1} + d \qquad (A.2)$$

The disturbance term *d* now has a constant distribution and the t-statistic on y_{t-1} provides a means for testing non-stationarity. If the coefficient on y_{t-1} is zero, then *b* must be equal to 1, and *y* is therefore stationary. The Augmented Dickey-Fuller test is a test on the t-statistic of the coefficient on y_{t-1}. The hypothesis $H_0 = b-1 = 0$ is called the unit-root hypothesis and it implies that y_t is non-stationary.

The second test for non-stationarity is the Durbin-Watson (DW) test on the levels regression specified above. Since the DW statistically is given by

$$DW = 2(1-r) \qquad (A.3)$$

where *r* is the correlation coefficient between y_t and y_{t-1}, then *y* is white noise when *r* is zero. The DW is therefore 2 when *y* is stationary.

Step 2: Modeling Supply and Demand Relationships

Economic series that are related to the long-run adjustment processes of other variables have been designated to be cointegrated series by Granger and Weiss (1983) and Engle and Granger (1987). The theory of cointegration states that if two series, *x* and *y*, grow over time in such a way that the linear combination of these two variables, given by $d_t = x_t - \alpha y_t$, is stationary, and if α is unique, then *x* and *y* are said to be cointegrated. The series d_t measures the disequilibrium at period *t* when the long-run relationship between the two variables is $x_t = \alpha y_t$. The theory of cointegration states that movements in variables are related in a predicable way to the discrepancy between observed and equilibrium states. The sequence of this discrepancy tends to decay to its mean of zero.

Engle and Granger (1987) have demonstrated that a data-generating process of the form known as the "error-correction mechanism" (ECM) adjusts for any disequilibrium between variables that are cointegrated. The ECM specification thus provides the means by which the short-run observed behavior of variables is associated with their long-run equilibrium growth paths. Davidson *et al.* (1978) established a closely-related specification know as the "equilibrium-correcting mechanism" (also having the acronym ECM) that models both the short and long-run relationships between variables.

Rearranging the terms of a first-order stochastic difference equation yields the following ECM:

$$\Delta x_t = \alpha_o + \alpha_1(x - y)_{t-1} + \alpha_2 \Delta y_t + \alpha_3 y_{t-1} + v_t \quad (A.4)$$

where $-1 < \alpha_1 < 0$, $\alpha_2 > 0$ and $\alpha_3 > -1$, and where all variables are measured in logarithmic terms.

The second term, $\alpha_1(x - y)_{t-1}$, is the mechanism for adjusting any disequilibrium in the previous period. When the rate of growth of the dependent variable x_t falls below its steady-state path, the value of the ratio of variables in the second term decreases in the subsequent period. That decrease, combined with the negative coefficient of the term, has a positive influence on the growth rate of the dependent variable. Conversely, when the growth rate of the dependent variable increases above its steady-state path, the adjustment mechanism embodied in the second term generates downward pressure on the growth rate of the dependent variable until it reaches that of its steady-state path. The speed with which the system approaches its steady-state path depends on the proximity of the coefficient to minus one. If the coefficient is close to minus one, the system converges to its stead-state path quickly; if it is near to zero, the approach of the system to the steady-state path is slow. Since the variables are measure in logarithms, Δx and Δy can be interpreted as the rate of change of the variables. Thus the third term, $\alpha_2 \Delta y_t$, expresses the steady-state growth in *X* associated with *Y*. Finally, the fourth term, $\alpha_3 y_{t-1}$, shows that the steady-state response of the dependent variable *X* to the variable *Y* is non-proportional when the coefficient has non-zero significance.

The equilibrium solution of equation (A.4) is a constant value if there is convergence. Since the solution is unrelated to time, the rate of change over time of the dependent variable *X* (given by Δx_t) and the explanatory variable *Y* (given by Δy_t) are equal to zero. However, in dynamic equilibrium, equation (A.4) generates a steady-state response in which growth occurs at a constant rate, say *g*. For the dynamic specification of the relationship in (A.4), if g_1 is defined as the steady-state growth rate of the dependent variable *X,* and g_2 corresponds to the steady-state growth rate of the explanatory variable *Y,* then, since lower-case letters denote the logarithms of variables, $g_1 = \Delta x$ and $g_2 = \Delta y$ in dynamic equilibrium. In equilibrium the systematic dynamics of equation (A.4) are expressed as:

$$g_1 = \alpha_o + \alpha_1(x - y) + \alpha_2 g_2 + \alpha_3 y \quad (A.5)$$

or, in terms of the original (anti-logarithmic) values of the variables:

$$X = k_0 Y^{\beta} \quad (A.6)$$

where $k_0 = \exp\{(-\alpha_o/\alpha_1) + [(\alpha_1 - \alpha_2\alpha_1 - \alpha_3)/ \alpha_1^2]g_2$, and where $\beta = 1 - \alpha_3/\alpha_1$.

The dynamic solution of equation (A.6) therefore shows *X* to be influenced by changes in the rate of growth of *Y*, as well as the long-run elasticity of *X* with respect to *Y*. For

example, where the rate of growth of the explanatory variable accelerate, say from g_2 to g'_2, the value of the variable X would increase. However, it is important to reiterate that the response to each explanatory variable can be either transient or steady-state. When theoretical considerations suggest that an explanatory variable generates a transient, rather than steady-state, response, it is appropriate to constrain its long-run effect to zero.

Step 3: Modeling Exchange Rate Effects on Exports

The effects of changes in the international competitiveness of Vietnam can be measured by extending the first-order stochastic difference equation to include that variable. Transformation of an autoregressive distributed lag into an ECM with a 'differences' formulation of the relative price or exchange rate term nested in the levels form of the equation yields the equation:

$$\Delta x_t = \alpha_o + \alpha_1(x - y)_{t-1} + \alpha_2 \Delta y_t + \alpha_3 y_{t-1} + \alpha_4 \Delta r_t + \alpha_5 r_{t-1} + v_t \qquad (A.7)$$

where $-1 < \alpha_1 < 0$, $\alpha_2 > 0$, $\alpha_3 > -1$, $\alpha_4 > 0$ and $\alpha_5 > 0$, and where all variables are measured in logarithmic terms.

We measure the competitiveness, *r*, of Vietnam as the inverse of the real effective exchange rate, *e*. The real exchange rate (RER) is the bilateral rate which takes into account changes in relative price levels between Vietnam and a foreign country. It measures changes in the purchasing power between the domestic and the foreign economy, and it provides an indicator of changes in the international competitiveness of the domestic economy in its ability to purchase more (or less) goods and services per unit of foreign currency. As an extension, the real effective exchange rate (REER) measures the average relative strength of the local currency, and it is calculated as the weighted average of RERs, where the weights are the value of imports from and exports to a given partner country *i* divided by total imports and total exports of Vietnam.

Step 4: Modeling Price and Income Effects of Foreign and Domestic Imports

An important characteristic of the import demand for any one product is that its long-term response to the growth of domestic income is not necessarily proportional. This suggests that the dynamic specification of the import demand equation should not introduce any restrictions that would impose long-run unitary elasticity with respect to income. In contrast, the model should encompass long-term proportionality responses when they exist.

A second feature of the present modeling approach is that the dynamics for import demand relationships can be restricted to one period since the adjustment of imports to price and income changes tends to decline exponentially over time. The third and final important characteristic is that prices of traded goods are measured in US dollar terms. If prices of imports were measured in local currency units, then the demand for imports by Vietnam would also be directly affected by the real exchange rate, which would take into

account changes in both the relative prices of domestic and foreign goods and the nominal exchange rate, as well as the foreign market price of the product.

The dynamic specification for imports, M, in terms of income, Y, and the price of the product, P, relative to the general price index, D, can be expressed as:

$$m_t = \alpha_0 + \alpha_1 m_{t-1} + \beta_1 y_t + \beta_2 y_{t-1} + \gamma_1 (p-d)_t + \gamma_2 (p-d)_{t-1} + u_t \quad ...(A.8)$$

where lower case letters denote logarithms of corresponding capital letters, e.g., (p-d) = ln(P/D), and the expected signs of the coefficients are $0 < \alpha_1 < 1$; β_1 and $\beta_2 > 0$; γ_1 and $\gamma_2 < 0$. Income is treated as (weakly) exogenous for the parameters of interest.

The use of the logarithmic specification in equation (A.8) provides a means by which the elasticity can be calculated directly from the estimated equation; the results are consistent when the elasticities remain constant over time. Tests of parameter constancy provide a means of validating that hypothesis.

On a steady-state growth path, the long-run dynamic equilibrium relationship implicit in equation (A.8) is:

$$M = kY \left(\frac{P}{D}\right)^{\varepsilon_y} \varepsilon_p \quad ...(A.9)$$

where $\varepsilon_y = (\beta_1 + \beta_2)/(1-\alpha_1)$ and $\varepsilon_p = (\gamma_1 + \gamma_2)/(1-\alpha_1)$.

The results of the estimates provide quantitative measures of the impact that Vietnam's market access concessions could have on its trade. Since data limitations restrict the application of the model, it is useful to review some of the widely used empirical models which equation (A.8) encompasses. These embedded models have been described by Hendry, Pagan and Sargan (1984) as follows:

(a) Static Model ($\alpha_1 = \beta_2 = \gamma_2 = 0$): $m_t = \alpha_0 + \beta_1 y_t + \gamma_1 (p-d)_t$
(b) Distributed Lag Model ($\alpha_1 = 0$): $m_t = \alpha_0 + \beta_1 y_t + \beta_2 y_{t-1} + \gamma_1 (p-d)_t + \gamma_2 (p-d)_{t-1}$
(c) Partial Adjustment Model ($\beta_2 = \gamma_2 = 0$): $m_t = \alpha_0 + \alpha_1 m_{t-1} + \beta_1 y_t + \gamma_1 (p-d)_t$
(d) First-Difference Model ($\alpha_1 = 1, \gamma_1 = -\gamma_2$): $\Delta m_t = \alpha_0 + \beta_1 \Delta y_t + \xi_1 \Delta p_t$

B. Effective Rate of Protection

The Concept of Effective Rate of Protection - Countries such as Vietnam apply tariffs to generate fiscal revenue and to protect industries from foreign competition. The measure of that protection is given by the nominal rate of protection (NRP), which accounts for the extent to which output prices can be raised by domestic firms relative to border prices under protection from foreign competition. In addition to the resource pull into protected sectors, there may be offsetting effects from tariffs on tradable inputs that artificially raise the input prices and the associated costs to firms in the protected sectors. The measure of the net effect of the resource pull and higher costs associated with a tariff schedule is

given by the effective rate of protection (ERP). The ERP measures the effect of a country's tariff schedule on the incentives to producers in an industry to expand or contract their activities relative to a situation of free trade. In contrast to the NRP, therefore, the ERP measures the effect on the value added derived from both the benefit of protection to an industry and the cost to it from the tariffs applied to its inputs.

Measuring the Effective Rate of Protection – The ERP for a product *j* is the percentage excess of domestic value added, *V*, over the international market value added, *W*, i.e., that value added that would have been realized in the absence of the existing tariff structure: $ERP_j = (V_j - W_j) / W_j$.. This measure is intuitively appealing insofar as it allows us to express the ERP in terms of border and domestic price equivalents for specific industries in Vietnam.

Alternatively, we can measure the ERP as the difference between the tariff on the final product and the weighted sum of tariffs on inputs to the product. Formally, we denote the output tariff for industry *j* by t_j, the input tariff for tradable input *i* by t_i, and the amount of input *i* in a unit of product *j* by a_{ij}. The NRP is given by t_j (or in percentage, t_j x 100), while the ERP is given by $(t_j - \Sigma_i t_i a_{ij})/(1 - \Sigma_i a_{ij})$, where Σ_i denotes "summation" over i and the a_{ij} in the numerator corresponds to the tariff situation and that in the denominator to free trade situation.

Ideally, the input-output coefficients would be measured with and without the current tariff distortions. As a practical matter, of course, free trade is not observable and so some adjustments must be made. This is done by recognizing that the observed unit-value input-output coefficient a_{ij}' – where " ' " denotes the tariff distorted situation – reflects the border price of input i inflated by a factor of $(1 + t_i)$ in the numerator and the border price of output j inflated by a factor of $(1 + t_j)$ in the denominator. Thus, the free trade value of a_{ij} is recovered by multiplying the observable coefficient a_{ij}' by the adjustment factor $(1 + t_j)/(1 + t_i)$.

Using this alternative methodology, we can calculate the ERP in the following manner:

$$\text{Let} \quad W_j = P_j(1 - \Sigma_i a_{ij}')$$
$$V_j = P_j[(1+t_j) - \Sigma_i a_{ij}' (1+t_i)]$$

where:

a_{ij} = technical coefficient of input in activity *j*, i.e., the value of input *i* per unit value of output in activity *j*;

t_j = nominal rate of protection of production of *j*;

t_i = nominal rate of protection of input *i*.

Then we can express the level of effective protection as follows:

$$ERP_j = \{P_j[(1+t_j) - \Sigma_i a_{ij}' (1+t_i)] / P_j(1 - \Sigma_i a_{ij}')\} - 1 \qquad (A.5)$$

Rearranging terms yields the formula used to estimate the level of effective protection:

$$ERP_j = (t_j - \Sigma i a_{ij}' t_i)/(1 - \Sigma_i a_{ij}') \quad (A.6)$$

$$= \{(1 - \Sigma a_{ij}')/([1/(1 + t_j)] - [\Sigma[a_{ij}'/(1 + t_i)]]\} - 1 \quad (A.7)$$

The ERP can exceed, equal, or fall short of the NRP depending on whether input tariffs are lower or higher relative to the output tariff. A negative ERP suggests that an industry is being taxed more heavily on its inputs than its final product.

C. Revealed Comparative Advantage (RCA)

The index of revealed comparative advantage (RCA) used in this study is specified as follows:

$$RCA_{ij} = (X_{ij} / X_j) / (X_i / X) \quad (A.8)$$

where,

X_{ij} = exports of product i from country j.
X_i = exports of product i from the world.
X_j = exports of all goods from country j.
X = exports of all goods from the world.

The RCA index compares a country's exports of a product (normalized with respect to the value of its total exports) to the share of that product in world trade. The normalization with respect to the value of total exports adjusts for country size. In this way small country output can be compared with that of the large countries in the region. The index also scales for product significance as a way of accounting for the importance of trade in one good relative to that of all goods.

The interpretation of the RCA index is as follows: an RCA value greater than one implies a comparative advantage since the nation's ratio of product exports to total exports of all goods is greater than the comparable ratio for the world. In contrast, an RCA value of less than one implies a comparative disadvantage.

The index takes into consideration several market ratios when adjusting for country size and product significance, and gives useful information depending on how the terms in the formula are arranged. In the formula above, the index is expressed as the share of the product division with respect to total exports for the specific country or region (X_{ij}/X_j), given the same world's share (X_i/X). This interpretation is useful when analyzing countries' RCA indices since it shows the degree of export concentration across products.

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