

The Northeast Economic Zone

A Regional Trade Profile

Prepared by:

David L. Cook

Thunder Lake Management Inc.

November 2002

Table of Contents

	Page
Introduction.....	1
The Northeast Regional Economy	4
NEZ’s Trading Economy: Summary	9
NEZ’s Regional Trade	10
State-to-State Trade	10
Province-to-State Trade	19
State-to-Province Trade	33
Province-to-Province Trade	45
The Role of Trade Corridors.....	51
NEZ’s Global Trade.....	59
NEZ-US Total Global Exports.....	59
NEZ-Canada Global Exports	61
Conclusions.....	66

List of Figures

NEZ-US Gross State Product by Sector, 2000 (percentage)	5
NEZ-Canada Gross Domestic Product by Sector, 2001 (percentage)	7
The Northeast Economic Zone	9
NEZ-Canada Border Crossings: New Brunswick.....	52
NEZ-Canada Border Crossings: Quebec	58
NEZ-US Global Export Markets, 2001 (percent of value).....	61
NEZ-Canada Global Export Markets, 2001 (percentage of value).....	62

List of Tables

NEZ states, Gross State Product, 1996 – 2000 (US\$ millions)	4
NEZ states, Gross State Product by Sector, 2000 (US\$ millions).....	6
NEZ provinces, Gross Domestic Product by Sector, 2001 (C\$ millions)	7
Intra-State, Outbound and Inbound Shipments, 1997 (percentage).....	10
Maine – Outbound Shipments, 1997	11
Maine – Inbound Shipments, 1997	12
New Hampshire – Outbound Shipments, 1997.....	12
New Hampshire – Inbound Shipments, 1997	13
Connecticut – Outbound Shipments, 1997	13
Connecticut – Inbound Shipments, 1997	14
Massachusetts – Outbound Shipments, 1997.....	14
Massachusetts – Inbound Shipments, 1997	15
Vermont – Outbound Shipments, 1997	15
Vermont – Inbound Shipments, 1997	16
Rhode Island – Outbound Shipments, 1997	16
Rhode Island – Inbound Shipments, 1997	17
New York – Outbound Shipments, 1997.....	17
New York – Inbound Shipments, 1997.....	18
NEZ-Canada, Top 5 Export Industries, 2001 (US\$ millions)	19
NEZ-Canada’s Key Markets in NEZ-US	19
Newfoundland Exports to NEZ-US, 1997 – 2001 (US\$).....	20
Newfoundland, Top 5 Export Industries, 2001 (US\$ millions).....	20
PEI Exports to NEZ-US, 1997 – 2001 (US\$).....	23
PEI Top 5 Export Industries, 2001 (US\$ millions).....	23
Nova Scotia Exports to NEZ-US, 1997 – 2001 (US\$)	25
Nova Scotia Top 5 Export Industries, 2001 (US\$ millions).....	26
New Brunswick Exports to NEZ-US, 1997 – 2001 (US\$).....	28
New Brunswick Top 5 Export Industries, 2001 (US\$ millions).....	28
Quebec Exports to NEZ-US, 1997 – 2001 (US\$ thousands).....	31
Quebec Top 5 Export Industries, 2001 (US\$ millions)	31
NEZ-US Exports to NEZ-Canada, 1997 – 2001 (US\$).....	33
NEZ-US Top 5 Export Industries, 2001 (US\$ millions)	33
NEZ-US Key Export Markets in NEZ-Canada	33
Maine Exports to NEZ-Canada, 1997 – 2001 (US\$).....	34

New Hampshire Exports to NEZ-Canada, 1997 – 2001 (US\$).....	34
Connecticut Exports to NEZ-Canada, 1997 – 2001 (US\$).....	35
Massachusetts Exports to NEZ-Canada, 1997 – 2001 (US\$).....	36
Vermont Exports to NEZ-Canada, 1997 – 2001 (US\$).....	36
Rhode Island Exports to NEZ-Canada, 1997 – 2001 (US\$).....	37
New York Exports to NEZ-Canada, 1997 – 2001 (US\$).....	37
NEZ-Canada’s For-Hire Truck Volumes, 1997 (thousand tonnes).....	49
NEZ-Canada’s For-Hire Trucking Volumes, Extra-Regional, 1997 (thousand tonnes).....	50
Exports by Truck, Atlantic Provinces, 1996 (C\$ millions).....	51
Daily Truck Traffic, Major New Brunswick Border Crossings, 1986 – 1996.....	53
Newfoundland Road Exports to US/Mexico by Border Crossing, 1996 (C\$ millions).....	54
PEI Road Exports to US/Mexico by Border Crossing, 1996 (C\$ millions).....	55
Nova Scotia Road Exports to US/Mexico by Border Crossing, 1996 (C\$ millions).....	55
New Brunswick Road Exports to US/Mexico by Border Crossing, 1996 (C\$ millions).....	56
Quebec Road Exports to US/Mexico by Border Crossing, 1996 (C\$ billions).....	57
Daily Truck Traffic, Major Quebec Border Crossings, 1986 – 1996.....	57
NEZ-US Exports to NEZ-Canada and the World, 2001 (US\$).....	59
NEZ-US Exports to Canada and NEZ-Canada, 2001 (US\$).....	60
Newfoundland’s International Trade, 1992 and 1998 (C\$ millions).....	63
PEI’s International Trade, 1992 and 1998 (C\$ millions).....	63
Nova Scotia’s International Trade, 1992 and 1998 (C\$ millions).....	64
New Brunswick’s International Trade, 1992 and 1998 (C\$ millions).....	64
Quebec’s International Trade, 1992 and 1998 (C\$ millions).....	65

Introduction

Globalisation and Trade

While economic globalisation has been a feature of the international system throughout history, it has assumed new importance since the close of the Second World War. The post-war establishment of the modern international economic system was characterised in part by the global agreements to reduce or eliminate tariff and nontariff barriers to international trade. There are now over 200 regional trade agreements worldwide that complement the multilateral architecture represented by the World Trade Organisation. Most of the regional trade agreements have been negotiated and implemented since the 1990s.

Within North America, the impact of globalisation processes has been evident in the successful negotiation of the Canada-US Free Trade Agreement (FTA) in 1989, and subsequently by the North American Free Trade Agreement (NAFTA) in 1994. Among the chief effects of these regional agreements in North America has been the re-orientation of trade from an east-west axis to a north-south one.

Globalisation also is contributing to the liberation of regional forces in North America. Many observers have noted that globalisation is transforming the authority structure of the nation state¹. Decision-making powers are being pushed up to the supra-national level and down to the subnational level. The uploading of decision-making authority is occurring in the face of issues beyond the capacity of a single state to manage. Increasingly, regulatory oversight and management functions are being repositioned within supra-national agencies and institutions, including NAFTA. Decision-making power is also moving down from national governments. This may take several forms, including downloading to markets (through deregulation and privatisation), subnational governments, and to individuals. In effect, the traditional state-to-state configuration of the international domain is being gradually transformed into a system that gives full play to “region states” as key policy arenas². This is not to suggest that the national decision-making apparatus is evaporating³.

¹ See for example, Thomas J. Courchene, “Ontario As A North American Region State,” comments prepared for BORDERLINES: CANADA IN NORTH AMERICA, Calgary, September 12/13, 2002; “Canada's New Geo-Economy: The Emergence of Ontario as a North American Region State,” *Regional & Federal Studies*, Issue 9.3 1999, page 65; and “Glocalization: The Regional-International Interface,” *Canadian Journal of Regional Science*, XVIII: 1 (Spring, 1995), 1-20.

² A collection of papers addressing the issue can be found in “Is Ontario A Region-State?,” Policy Options, January-February 2000. For a paper reviewing the Ontario-Michigan border region at Detroit, see Emmanuel Brunet-Jailly, “Globalization, Integration, And Cross-Border Relations In The Metropolitan Area Of Detroit (USA) And Windsor (Canada),” *International Journal of Economic Development* (Vol. 2, No. 3, 2000), pp. 379-401.

³ John F. Helliwell, in “The Scope for National Policies in a Global Economy,” (July, 1999) argues that the Canadian trade data point more intense interprovincial trade activity than cross-border. This more tightly woven national fabric is considered an argument for the continuing relevance of national policy-making. The globalisation literature however is not suggesting that the national level is irrelevant, only that it is undergoing profound transformation.

Increasingly, international trade and investment occurs within and through the myriad relationships and networks that exist at the subnational level. This is after all the level where actual businesses are to be found innovating and competing across the continent. It is in the nature of globalisation to open new opportunities for subnational jurisdictions to participate in shaping the continental economy. In this connection, other subnational jurisdictions across North America gradually are orienting their policy and regulatory regimes to attract and facilitate business arrangements, investment, visitors, and exports.

Nature of the Report

This report examines a transborder region focused on the northeastern seaboard of North America. Even though the Northeast Economic Zone (NEZ) has a highly diversified economy, economic development is a key issue throughout the region. The challenge is to build on existing strengths while being responsive to new economic opportunities. Questions that the Northeast Economic Zone is confronting include: Can Northeast Economic Zone jurisdictions develop a shared vision for the future? What kind of initiatives, at what levels, need to be taken to ensure that progress can be made? Who should articulate a shared vision for the region? What are the core competencies and resources that will help the region prosper in the future? How can jurisdictions partner to build on existing knowledge and infrastructure? In which fields can stakeholders promote collaboration within the region? How will progress be measured?

The purpose of this report is to provide an initial overview of trade between and among the participating jurisdictions of the Northeast Economic Zone. In effect, the report is an attempt to construct a view of the Northeast Economic Zone as a single, organic entity. Because data sources conform to geo-political boundaries, the Northeast Economic Zone is not recognised as an economic entity. To understand the realities of the Northeast Economic Zone, such a view must be built from the material available. Accordingly, US and Canadian participating jurisdictions are generally described statistically as separate entities. In these instances, the two areas are described as the NEZ – US and the NEZ – Canada. Occasionally, the terms “NEZ state/states” and “NEZ province/provinces” are used for this purpose.

Approach

The report includes a brief overview of key elements of the Northeast Economic Zone economy, namely the key features of gross state and domestic product, and the broad sectoral composition of the economies of the participating jurisdictions. However, further work needs to be done on other features of the region’s demography, including personal income and income composition, major industries and companies, establishments, value, and employment by industry, as well as key factors influencing economic development within the Northeast Economic Zone.

The main body of the report focuses on trade, and describes the value, volume, and composition of trade within the Northeast Economic Zone by origin and destination. For comparative purposes, the Northeast Economic Zone’s key global markets also are

identified. However, much work remains to be done on the Northeast Economic Zone's trading economy. The report does not include an examination of the NEZ trade relationship with Mexico, other North American regions, or a detailed treatment of other international markets. Nor does it address the investment and tourism dimensions of the NEZ's internal and external relations. Clearly, these all are areas of interest for future study.

The Regional Economy

Bounded by the Atlantic Ocean to the east, the Northeast Economic Zone includes the US states of Maine, New Hampshire, Vermont, Connecticut, Massachusetts, Rhode Island, and the northern half of New York. The Canadian provinces of Prince Edward Island, New Brunswick, Nova Scotia, Newfoundland and Labrador, and Quebec complete the region. This is a region with a rich history as the focus of initial European settlement on the continent. As such, it has a lengthy trade history tied to agriculture, forestry and fisheries. Since the 1960s, the region has been economically expanding and diversifying beyond traditional commodity production to include manufacturing (including food processing), wholesale and retail trade, tourism, finance and insurance, information and communication technology, telecommunications, mining, utilities, transportation and warehousing, and construction.

This section provides a brief overview of the regional economy, focusing on the key features of gross domestic and state product. The Northeast Economic Zone has significant natural resources, skilled labour, and the financial and transportation infrastructure to access continental and global markets. The coastal geography of the region has allowed citizens to exploit access to the sea for more than 500 years. The Atlantic Ocean and access to it continues to define the perceptions and thinking of the peoples who inhabit its shorelines and benefit from trading within and beyond its geographic boundaries.

The Northeast Economic Zone's Gross Regional Product

The Northeast Economic Zone's gross regional product can be determined on the basis of Gross State Product (GSP) and Gross Domestic Product (GDP). GSP is the annual performance measure reported by the US Bureau of Economic Analysis. GDP is reported in Canada for each of the provinces by Statistics Canada.

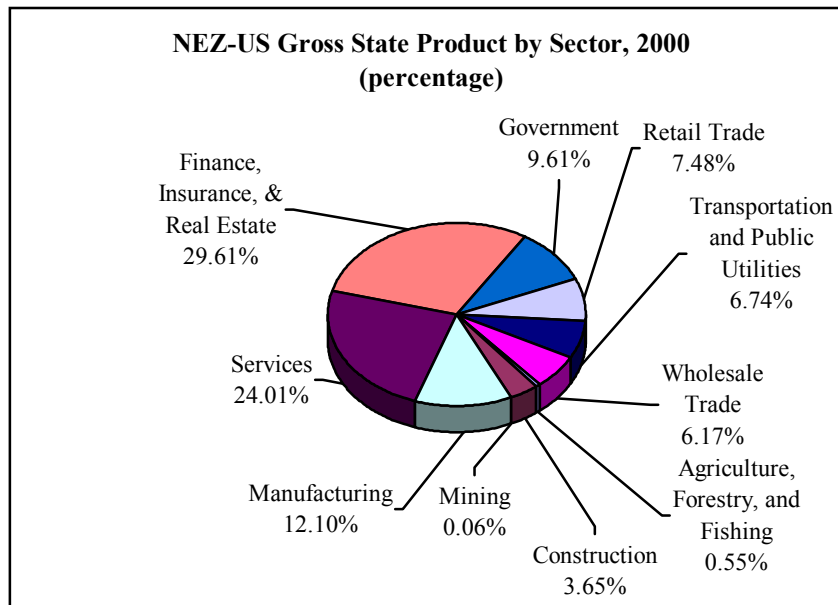
NEZ-US Region

Gross State Product (millions of current dollars)					
State	1996	1997	1998	1999	2000
Connecticut	124,157	134,968	142,701	149,483	159,288
Maine	28,925	30,409	32,208	34,196	35,981
Massachusetts	210,127	223,571	241,369	261,307	284,934
New Hampshire	35,068	37,470	40,529	43,616	47,708
New York	633,830	663,377	718,686	749,421	799,202
Rhode Island	26,656	29,409	30,838	32,154	36,453
Vermont	14,662	15,510	16,294	17,206	18,411
NEZ-US Total	1,073,425	1,134,714	1,222,625	1,287,383	1,381,977

Source: Bureau of Economic Analysis, U.S. Department of Commerce,
<http://www.bea.doc.gov/bea/regional/gsp/action.cfm>

Over the 1996 – 2000 period, the Gross State Product for NEZ-US grew by 28.7%, compared to 28.8% for the US as a whole. Among NEZ states, New York accounted for 57.8% of the NEZ-US gross product. New York's GSP growth was 26.0% over the 1996 – 2000 period.

The largest increases in GSP, however, occurred in Rhode Island (36.8%), New Hampshire (36.0%), and Massachusetts (35.6%).



Source: Bureau of Economic Analysis, Survey of Current Business, "Gross State Product for States by Industry," 2001 (September 2002).

Finance, Insurance & Real Estate (29.6%), Services (24.0%), and Manufacturing (12.1%) were the leading economic sectors in 2001. Agriculture, Forestry, and Fishing (0.55%) and Mining (0.06%) represent traditional economic activity within the region. Though they are significant particularly on a state basis, every

other sector accounts for more economic value than these two resource sectors.

Government (9.61%), Retail Trade (7.48%), Transportation and Public Utilities (6.74%), Wholesale Trade (6.17%), and Construction (3.65%) are large enough to indicate that the NEZ-US region contains a diversified, modern economy.

Turning to the relative contributions of economic sectors across NEZ-US in 2000, the finance, insurance, and real estate industry is the leading sector in four states. In Connecticut, the sector is not only the largest in the state; it is proportionately the leading one in the NEZ-US region.

Services are the largest sector in Maine, Vermont, and Massachusetts. Manufacturing in New Hampshire (20.5%), Vermont (17.3%), Connecticut (15.6%), and Maine (15.5%) reflect the diversified goods-producing economy across the region. The economic clout of New York is evident in that 57.8% of NEZ-US gross product is accounted for by the state. Moreover, New York's dominance is across-the-board: it accounts for the single largest portion of each sector's output.

2000 Gross State Product by Sector for NEZ States, US NEZ Region, and US (US\$ millions)

	Maine	New Hampshire	Vermont	Conn.	Mass.	Rhode Island	New York	US NEZ	US Total
Agriculture, Forestry & Fishing	693	341	401	1,090	1,545	227	3,385	7,682	135,750
Mining	5	36	36	112	97	11	615	912	127,084
Construction	1,693	2,060	831	5,579	12,556	1,898	25,958	50,575	463,635
Manufacturing	5,561	9,777	3,179	24,897	37,956	4,450	81,644	167,464	1,566,579
Transportation & Public Utilities	2,457	2,707	1,346	9,399	16,075	2,343	58,750	93,077	825,016
Wholesale Trade	2,138	3,212	1,021	9,726	20,467	1,854	46,841	85,259	674,145
Retail Trade	4,253	4,617	1,799	12,876	22,004	3,244	54,630	103,423	893,855
Finance, Insurance, & Real Estate	6,667	11,587	3,281	47,045	69,651	10,796	259,929	408,956	1,936,304
Services	7,422	9,685	4,121	35,235	79,674	7,465	188,190	331,828	2,164,630
Government	5,090	3,684	2,396	13,326	24,908	4,164	79,260	1,381,977	1,154,555
Total	35,981	47,708	18,411	159,288	284,934	36,453	799,202		9,941,552

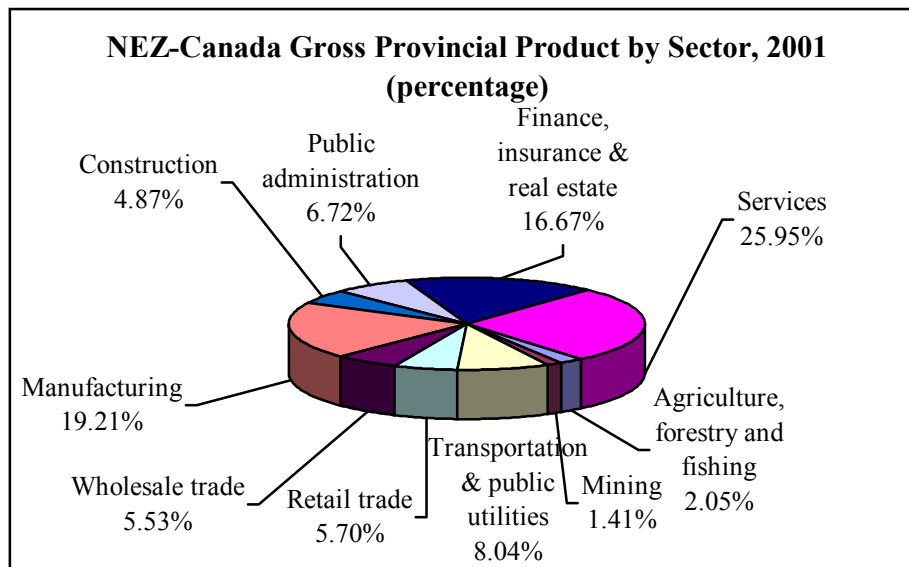
Source: Bureau of Economic Analysis, Survey of Current Business, "Gross State Product for States by Industry," 2001 (September 2002). Row and column totals conflict due to rounding.

NEZ -Canada Region

Gross Domestic Product (GDP) by industry for NEZ-Canada in 2001 shows that the services sector dominated at 25.9%, followed by manufacturing (19.2%), and finance, insurance and real estate (16.6%). All the other component sectors comprised less than 10% of the regional GDP, with agriculture, forestry and fishing (2.0%), and mining (1.4%) making the smallest contribution.

In terms of relative contribution to the NEZ-Canada gross product, Quebec accounts for 76.6% of the total, and dominated in every industry with the exception of mining. The services sector is dominant in each of the provinces, varying from 24.1% of provincial GDP in Nova Scotia to 28.2% in Prince Edward Island.

Finance, insurance and real estate are the second ranked industry, with over three-quarters of the total attributable to Quebec.



Source: Calculated from data contained in Statistics Canada, Table 379-0025, *GDP at basic prices, by NAICS and provinces, annual*

On a provincial basis, the finance, insurance and real estate sector made a contribution ranging from 21.7% in Nova Scotia to 16.2% in Newfoundland.

A comparison of industrial sectors in NEZ-Canada and Canada as a whole indicates that for the most part, there is a high degree of similarity. Agriculture, forestry and fishing for NEZ-Canada were close to the national percentage (2.05% versus 2.27%).

2001 Gross Domestic Product by Sector for NEZ Provinces, NEZ-Canada Region, (C\$ millions)

	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	NEZ Canada	Canada Total
Agriculture, Forestry & Fishing	377.2	173.7	499.6	675.9	3,610.5	5,336.9	21,316.0
Mining	1,527.3	3.4	359.2	332.0	1,449.4	3,671.3	36,703.0
Construction	538.5	136.2	1,114.2	769.4	10,120.9	12,679.2	50,238.0
Manufacturing	741.5	277.7	2,363.8	2,452.1	44,247.5	50,082.6	162,713.0
Transportation & Public Utilities	973.0	133.0	1,446.0	1,678.1	16,730.0	20,960.1	70,962.0
Wholesale Trade	503.6	120.7	1,108.5	856.9	11,816.9	14,406.6	56,131.0
Retail Trade	712.7	193.6	1,385.6	1,069.1	11,511.2	14,872.2	51,334.0
Finance, Insurance, & Real Estate	1,861.4	587.0	4,516.1	3,014.6	33,484.5	43,463.6	176,468.0
Services	3,057.3	796.7	5,012.2	4,507.4	54,263.7	67,637.3	253,729.0
Public Administration	1,027.9	376.3	2,095.3	1,703.6	12,320.2	17,523.3	52,873.0
Total	11,490.7	2,823.8	20,807.1	17,059.2	199,554.5	260,617.6	939,901.0

Source: Statistics Canada. GDP at basic prices, 1997 Constant Dollars. Totals reflect all components, and therefore do not agree with elements displayed.

Manufacturing industries accounted for 19.21% of the regional GDP, while in the case of Canada they accounted for 17.31%. However, in the case of the services industries, the NEZ-Canada share was 25.95% and for Canada it was 26.91%.

Overall, NEZ-Canada is more oriented toward manufacturing than is NEZ-US. For their part, NEZ-US states are drawing their economic strength from the finance, insurance, and real estate sector. Under a different transportation regime, the NEZ provinces could not only diversify their sourcing of financial and insurance services (away from deficit inducing Ontario), they also could assume a larger role as an advanced manufacturing base for the Northeast Economic Zone.

It bears noting however that there is a difference in the extent to which the jurisdictions are oriented toward foreign trade. Exports as a percentage of gross domestic product and gross state product provides an indication of the relative importance of trade to each of these NEZ jurisdictions.

Overall, international trade makes a much larger contribution to the NEZ-Canada economies than it does to the NEZ-US ones. For NEZ-US states combined, international exports represented 5.6% of total GSP in 1998. By 2000, it had reached 5.8%. In contrast, international exports accounted for 20.2% of NEZ-Canada's GDP in 1992. By 1998, exports represented 34.3% of GDP.

NEZ's Trading Economy: Summary



Northeast Economic Zone

- Total two-way trade between NEZ states and provinces in 2001 reached US\$20.6 billion. Bilateral trade increased by 7.9% during 1997 – 2001.
 - The overwhelming proportion of trade was exports from the NEZ provinces, which were worth \$16 billion to the NEZ-US jurisdictions.
 - NEZ-US exported \$4.6 billion in goods to NEZ-Canada provinces in 2001.
 - Over the 1997 to 2001 period, total exports from NEZ provinces to NEZ states increased from US\$13.6 billion to \$16 billion, an increase of 17.6%.
 - In contrast, exports from NEZ states to NEZ provinces in the same period fell from \$5.5 billion to \$4.6 billion, a drop of 16.4%.
- The top exports from NEZ-Canada to NEZ-US included semiconductors, energy, paper, and intermediate aluminum products.
 - The top exports from NEZ-US to NEZ-Canada were semiconductors, aerospace products, sawn logs, paper products, and computers and peripherals.
 - International exports by NEZ-US jurisdictions were mainly bound for developed industrial markets. In 2001, the top five NEZ-US global export markets were Canada (\$17.5 billion), Japan (\$6.7 billion), United Kingdom (\$6.1 billion), Switzerland (\$4.4 billion), and France (\$3.9 billion).
 - The value of NEZ-US exports to all markets was \$76.6 billion in 2001, up from \$70.2 billion in 1999 for a gain of 9.1%. The value of exports to the top five markets reached 28.6 billion in 2001.
 - International exports of NEZ-Canada provinces went to developed, industrial economies. In 2001, NEZ-Canada's top five global export markets were the US (\$48.4 billion), United Kingdom (\$1.3 billion), Germany (\$925 million), France (\$822 million), and Japan (647 million).
 - Between 1997 and 2001, NEZ-Canada registered gains in international exports. The value of exports to all markets rose from \$46.9 billion to \$57.5 billion during the five-year period, an increase of 22.4%. The value of exports to the top five markets rose from \$40.9 billion in 1997 to \$52.1 billion in 2001, an increase of 27.1%.
 - In State-to-State trade, major traded products were electronic equipment, textile and leather articles, and fats and oils.

- In Province-to-Province trade, the primary items traded were financial and business services, transportation equipment and services, food products, refined petroleum products, and paper products.

NEZ's Regional Trade

State-to-State Trade: Movement of Goods in NEZ-US

When measured by value, NEZ states reported larger movement of goods within their own borders, rather than to other NEZ states⁴. Of total shipments among the NEZ states of \$598.6 billion, \$212.5 billion or 35.5% comprised intra-state shipments. As could be expected, intra-state shipments were dominant throughout the NEZ states. With the exception of New Hampshire, intra-state shipments on value and tonnage exceeded inter-state amounts by a large margin. In the New Hampshire case, Massachusetts accounted for 20.6% of the value of outbound shipments, and 15.7% of inbound shipments. However, as is the case in the NEZ provinces, shipments within each jurisdiction are the single most significant aspect of commercial activity in the NEZ states.

Intra-State Shipments As A Percentage of Total Outbound and Inbound Shipments, 1997				
State	Outbound Shipments		Inbound Shipments	
	Percent of Value	Percent of Tonnage	Percent of Value	Percent of Tonnage
Connecticut	25.1	59.2	29.8	53.1
Maine	31.8	74.8	31.1	67.2
Massachusetts	36.4	72.8	37.3	63.2
New Hampshire	12.1	46.7	14.9	61.2
New York	42.1	77.5	35.4	66.5
Rhode Island	22.6	NP	22.5	NP
Vermont	21.2	62.6	24.4	41.8

Source: Calculated from US Census Bureau, 1997 Economic Census, Transportation – Commodity Flow Survey, Issued December 1999.

NP=Not Provided.

Movements of a few key products dominated shipments among NEZ states. Based on value, electronic equipment, textile and leather articles, and prepared foodstuffs and fats

⁴ Sources of information on state-to-state trade are limited in coverage and timeliness. The most accessible source for this study is the 1997 Transportation Commodity Flow Survey, which was part of the US Economic Census carried out in the same year. The CFS is limited in its coverage because it focuses only on the goods industries. However, it does not provide comprehensive coverage of the goods producing sectors. Among the excluded establishments are those classified as farms, forestry, fisheries, governments, construction, transportation, foreign establishments, services, and most retail businesses.

and oils were the principal products shipped among the NEZ states. Electronic equipment accounted for shipments valued at \$97.1 billion or 16.2% of the total value of all shipments within the NEZ-US region. Articles of textile and leather were valued at \$25.9 billion and represented 4.3% of total regional shipments. Prepared foodstuffs and fats and oils were worth \$21.5 billion, and accounted for 3.6% of total shipment value.

The NEZ states had a total shipped tonnage of 537,355,000 tons in 1997. Based on weight, gravel and crushed stone was the top shipment for NEZ states, amounting to 101,436,000 tons or 18.9% of the total tonnage shipped within and among the NEZ states. Nonmetallic minerals & .1%) and plastics and rubber (2.7%) were the other leading shipments by weight. As a percentage of each NEZ state's total US shipments by value, their interstate shipments were: Connecticut (74.9%); Maine (68.2%); Massachusetts (63.6%); New Hampshire (87.9%); New York (57.9%), Rhode Island (77.4%), and Vermont (78.8%).

Maine's Shipments to Other NEZ-US States

MAINE OUTBOUND SHIPMENTS, 1997

Destination State	Value (millions of US\$)	Percent	Tons (thousands)	Percent
Connecticut	716	3.1	240	0.5
Maine	7,324	31.8	33,362	74.8
Massachusetts	2,204	9.6	1,297	2.9
New Hampshire	922	4.0	1,083	2.4
New York	2,060	9.0	NP	NP
Rhode Island	103	0.4	135	0.3
Vermont	624	2.7	366	0.8
Total	22,997	100	44,607	100

Source: U.S. Census Bureau, 1997 Economic Census, Transportation – Commodity Flow Survey, Issued December 1999, EC97TCF-ME. Table 7, page 33.

Maine's total movement of goods to all states totaled \$23.0 billion and 44,607,000 tons. Approximately \$6.6 billion (28.8%) and 3,121,000 tons (7%) of goods were shipped to other NEZ states. Of all the NEZ states, Massachusetts was the largest recipient of Maine's goods by value and by tonnage, reporting \$2.2 billion and 1,297,000 tons in 1997.

On a value basis, the principal products sold to NEZ states included textile and leather

articles, pulp, newsprint, paper and paperboard, electronic equipment, and machinery.

Of \$23.6 billion in inbound shipments to Maine, the NEZ states accounted for \$5.3 billion (22.7%). The major regional source of imports was Massachusetts, which was also the largest trading partner in the country. On a tonnage basis, New Hampshire was the largest trading partner accounting for inbound shipments to Maine of 8,367,000 tons. NEZ states contributed 10,127,000 tons, or 20.4% of total imports from other states.

MAINE INBOUND SHIPMENTS, 1997

Origin State	Value (millions of US\$)	Percent	Tons (thousands)	Percent
Connecticut	626	2.7	254	0.5
Maine	7,324	31.1	33,362	67.2
Massachusetts	2,428	10.3	775	1.6
New Hampshire	901	3.8	8,367	16.8
New York	1,025	4.4	629	1.3
Rhode Island	232	1.0	102	0.2
Vermont	125	0.5	NP	NP
Total	23,557	100	49,655	100

Source: U.S. Census Bureau, 1997 Economic Census, Transportation – Commodity Flow Survey, Issued December 1999, EC97TCF-ME. Table 8, page 34.
NP=Not Provided.

NEW HAMPSHIRE OUTBOUND SHIPMENTS, 1997

Destination State	Value (millions of US\$)	Percent	Tons (thousands)	Percent
Connecticut	589	1.9	920	2.3
Maine	901	2.9	8,367	20.6
Massachusetts	6,358	20.6	6,517	16.1
New Hampshire	3,730	12.1	18,967	46.7
New York	2,162	7.0	1,342	3.3
Rhode Island	166	0.5	101	0.2
Vermont	770	2.5	2,318	5.7
Total	30,843	100	40,586	100

Source: U.S. Census Bureau, 1997 Economic Census, Transportation – Commodity Flow Survey, Issued December 1999, EC97TCF-NH. Table 7, page 33.
NP=Not Provided.

New Hampshire's Shipments to Other NEZ-US States

Of total domestic shipments valued at \$30.8 billion, New Hampshire sent goods worth \$10.9 billion (35.5% of the total) to other NEZ states. Massachusetts was the dominant market for New Hampshire products, accounting for 20.6% of total domestic shipments. Within NEZ-US, Massachusetts was the market for 58.7% of New Hampshire's shipments.

On a tonnage basis, New Hampshire shipped goods weighing 40,586,000 tons. A total of 19,565,000 tons were shipped to other NEZ states. This represented 48.2% of total tonnage shipped in 1997. Maine accounted for 42.8% of tonnage shipped to other NEZ states, and Massachusetts accounted for 33.3%.

Electronic equipment, machinery, textile and leather articles, plastics and rubber, and other manufactured goods made up the bulk of outbound shipments.

NEW HAMPSHIRE INBOUND SHIPMENTS, 1997

Origin State	Value (millions of US \$)	Percent	Tons (thousands)	Percent
Connecticut	710	2.8	211	0.7
Maine	922	3.7	1,083	3.5
Massachusetts	3,918	15.7	4,172	13.5
New Hampshire	3,730	14.9	18,967	61.2
New York	1,041	4.2	448	1.4
Rhode Island	192	0.8	NP	NP
Vermont	426	1.7	418	1.3
Total	24,969	100	30,988	100

Source: U.S. Census Bureau, 1997 Economic Census, Transportation – Commodity Flow Survey, Issued December 1999, EC97TCF-MA. Table 8, page 34.
NP=Not Provided.

New Hampshire received shipments from all other states, as well as intra-state shipments, valued at \$24.9 billion in 1997. The NEZ states shipped goods worth \$7.2 billion or 28.9% of the total value.

Massachusetts accounted for 15.7% of total inbound shipments, and about 54.1% of NEZ-US shipments to New Hampshire.

Massachusetts was also the leading NEZ-US source of goods shipped

to New Hampshire on a tonnage basis, accounting for 65.9% of the total.

Of total tonnage of 30,988,000 from all domestic sources, the total tonnage originating in the NEZ states was 6,332,000 or 20.4% of total shipments by weight to New Hampshire.

Connecticut's Shipments to Other NEZ-US States**CONNECTICUT OUTBOUND SHIPMENTS, 1997**

Destination State	Value (millions of US\$)	Percent	Tons (thousands)	Percent
Connecticut	20,945	25.1	27,939	59.2
Maine	626	0.8	254	0.5
Massachusetts	4,826	5.8	2,289	4.9
New Hampshire	710	0.9	211	0.4
New York	13,469	16.2	4,786	10.1
Rhode Island	704	0.8	356	0.8
Vermont	446	0.5	NP	NP
Total	83,388	100	47,158	100

Source: U.S. Census Bureau, 1997 Economic Census, Transportation – Commodity Flow Survey, Issued December 1999, EC97TCF-CT. Table 7, page 33.
NP=Not Provided.

Connecticut's total movement of goods to all states amounted to \$83.4 billion and 47,158,000 tons in 1997. Of the totals, about \$62.4 billion (74.9%) and 19,219,000 tons (40.8%) were shipped to other states. Almost \$20.8 billion (24.9%) and 7,896,000 (16.7%) tons were shipped to other NEZ states. Of the NEZ states, New York received the largest shipments of Connecticut goods based on value and tonnage, amounting to \$13.5 billion and 4,786,000 tons in 1997.

Based on value of shipments, the leading exports to other NEZ states were electronic equipment,

machinery, formed metals, and pharmaceutical products. On a tonnage shipped basis, the leading exports to other NEZ states were formed metals, and coal and petroleum

products. Shipments within Connecticut were dominated by gravel and crushed stone on a tonnage basis.

CONNECTICUT INBOUND SHIPMENTS, 1997

Origin State	Value (millions of US\$)	Percent	Tons (thousands)	Percent
Connecticut	20,945	29.8	27,939	53.1
Maine	716	1.0	240	0.5
Massachusetts	5,474	7.8	4,583	8.7
New Hampshire	589	0.8	920	1.8
New York	5,485	7.8	3,144	6.0
Rhode Island	723	1.0	NP	NP
Vermont	245	0.3	132	0.3
Total	70,339	100	52,579	100

Source: U.S. Census Bureau, 1997 Economic Census, Transportation - Commodity Flow Survey, Issued December 1999, EC97TCF-CT. Table 8, page 34.
NP=Not Provided.

Of a total of \$70.3 billion in shipments from all states, Connecticut bought \$13.2 billion (18.8%) from NEZ states. Of a total of 52,579,000 tons, NEZ states accounted roughly for 9,019,000 tons (17.2%) of goods.

The principal sources of inbound shipments to Connecticut were dominated by Massachusetts and New York, with each accounting for 7.8% of the total value of inbound shipments.

Massachusetts' Shipments to Other NEZ-US States

Total Massachusetts' shipments were valued at \$142.2 billion in 1997. Of this total, shipments to NEZ states were worth \$30.2 billion or 21.2% of the total. Among all states, New York was the leading state market for Massachusetts, accounting for 9.9% of total domestic shipments, and 46.7% of shipments to NEZ states. On a tonnage basis, Massachusetts had total shipments of 90,866,000 tons in 1997. Shipments to NEZ states

amounted to 14,730,000 tons or 16.2% of the total. In terms of tonnage, Connecticut was the main market for Massachusetts, accounting for 5.0% of total tons shipped. Connecticut represented 31.1% of total tonnage shipped to NEZ states.

MASSACHUSETTS OUTBOUND SHIPMENTS, 1997

Destination State	Value (millions of US\$)	Percent	Tons (thousands)	Percent
Connecticut	5,474	3.8	4,583	5.0
Maine	2,428	1.7	775	0.9
Massachusetts	51,836	36.4	66,125	72.8
New Hampshire	3,918	2.8	4,172	4.6
New York	14,136	9.9	2,144	2.4
Rhode Island	2,992	2.1	2,279	2.5
Vermont	1,241	0.9	777	0.9
Total	142,223	100	90,866	100

Source: U.S. Census Bureau, 1997 Economic Census, Transportation - Commodity Flow Survey, Issued December 1999, EC97TCF-MA. Table 7, page 33.
NP=Not Provided.

Electronic equipment, pharmaceutical products, precision instruments, machinery, and textile and leather articles were leading goods shipped.

MASSACHUSETTS INBOUND SHIPMENTS, 1997

Origin State	Value (millions of US\$)	Percent	Tons (thousands)	Percent
Connecticut	4,826	3.5	2,289	2.2
Maine	2,204	1.6	1,297	1.2
Massachusetts	51,836	37.3	66,125	63.2
New Hampshire	6,358	4.6	6,517	6.2
New York	7,078	5.1	4,521	4.3
Rhode Island	2,921	2.1	3,473	3.3
Vermont	1,611	1.2	902	0.9
Total	138,935	100	104,611	100

Source: U.S. Census Bureau, 1997 Economic Census, Transportation – Commodity Flow Survey, Issued December 1999, EC97TCF-MA. Table 8, page 34.
NP=Not Provided.

104,611,000 tons in 1997. The NEZ states supplied 18,999,000 tons or 18.2% of the total tonnage. The leading national supplier on a tonnage basis was New Hampshire (6.2%), which also accounted for 34.3% of total tonnage from NEZ states.

Vermont's Shipments to Other NEZ-US States**VERMONT OUTBOUND SHIPMENTS, 1997**

Destination State	Value (millions of US\$)	Percent	Tons (thousands)	Percent
Connecticut	245	1.8	132	1.3
Maine	125	0.9	NP	NP
Massachusetts	1,611	11.9	902	8.6
New Hampshire	426	3.1	418	4.0
New York	2,312	17.0	758	7.3
Rhode Island	71	0.5	139	1.3
Vermont	2,882	21.2	6,545	62.6
Total	13,569	100	10,455	100

Source: U.S. Census Bureau, 1997 Economic Census, Transportation - Commodity Flow Survey, Issued December 1999, EC97TCF-VT. Table 7, page 33.
NP=Not Provided.

Massachusetts accounted for 33.3% of shipments to other NEZ states.

On a total shipped tonnage of 10,455,000 tons, Vermont's leading destination was Massachusetts, followed by New York. No other states in the nation had as large a presence in tonnage.

Shipments to Massachusetts in 1997 were valued at \$138.9 billion. Shipments from other NEZ states were worth \$24.9 billion or almost 18.0% of the total. California (6.1%) and New Jersey (5.8%) were the leading suppliers nationally. New York accounted for 5.1% of total inbound shipments, and was the leading supplier among NEZ states with 28.5% of the regional total.

Massachusetts received goods weighing

Vermont had total domestic shipments valued at \$13.6 billion in 1997. Vermont had shipments to other NEZ states valued at \$4.8 billion or 35.3% of total shipments. Key destinations for Vermont goods were New York (17.0%) and Massachusetts (11.9%). New York alone represented 47.9% of shipments to other NEZ states.

Major shipment categories included electronic equipment, processed foodstuffs, paper and printed products (paper, paperboard, and newsprint), machinery, and other manufactured products.

VERMONT INBOUND SHIPMENTS, 1997

Origin State	Value (millions of US\$)	Percent	Tons (thousands)	Percent
Connecticut	446	3.8	NP	NP
Maine	624	5.3	366	2.3
Massachusetts	1,241	10.5	777	5.0
New Hampshire	770	6.5	2,318	14.8
New York	1,452	12.3	3,481	22.2
Rhode Island	98	0.8	42	0.3
Vermont	2,882	24.4	6,545	41.8
Total	11,828	100	15,656	100

Source: U.S. Census Bureau, 1997 Economic Census, Transportation – Commodity Flow Survey, Issued December 1999, EC97TCF-VT. Table 8, page 34.
NP=Not Provided.

In 1997, total domestic shipments to Vermont were valued at \$11.8 billion. NEZ states shipped \$4.6 billion or 39.2% of the total. Of total shipments from NEZ states, New York was the main supplier accounting for about 32.6%. Massachusetts was also a key point of origin, shipping goods valued at \$1.2 billion or about 26.1% of shipments from the other NEZ states.

Inbound tonnage amounted to 15,656,000 tons in 1997. The NEZ states accounted for 6,984,000 tons or 44.6% of the total. The leading supplier based on tonnage shipped was New York, which accounted for 49.8% of the amount shipped by the NEZ states. New Hampshire's share of the NEZ states shipments was 33.2%.

Rhode Island's Shipments to Other NEZ-US States

RHODE ISLAND OUTBOUND SHIPMENTS, 1997

Destination State	Value (millions of US\$)	Percent	Tons (thousands)	Percent
Connecticut	723	4.7	NP	NP
Maine	232	1.5	102	0.5
Massachusetts	2,921	19.1	3,473	15.3
New Hampshire	192	1.3	NP	NP
New York	1,192	7.8	252	1.1
Rhode Island	3,443	22.6	NP	NP
Vermont	98	0.6	42	0.2
Total	15,255	100	22,669	100

Source: U.S. Census Bureau, 1997 Economic Census, Transportation - Commodity Flow Survey, Issued December 1999, EC97TCF-RI. Table 7, page 33.
NP=Not Provided.

Rhode Island had domestic shipments valued at \$15.3 billion in 1997. The NEZ states accounted for \$5.4 billion or 35.1% of the total.

By a large margin, Massachusetts was the leading state market, accounting for 19.1% of Rhode Island's domestic shipments. Massachusetts represented 53.7% of

domestic shipments to other NEZ states.

Tonnage data for Rhode Island is limited but Massachusetts is the dominant market for

RHODE ISLAND INBOUND SHIPMENTS, 1997

Origin State	Value (millions of US\$)	Percent	Tons (thousands)	Percent
Connecticut	704	4.6	356	1.7
Maine	103	0.7	135	0.7
Massachusetts	2,992	19.6	2,279	11.1
New Hampshire	166	1.1	101	0.5
New York	686	4.5	380	1.8
Rhode Island	3,443	22.5	NP	NP
Vermont	71	0.5	139	0.7
Total	15,300	100	20,541	100

Source: U.S. Census Bureau, 1997 Economic Census, Transportation - Commodity Flow Survey, Issued December 1999, EC97TCF-RI. Table 8, page 34.
NP=Not Provided.

Rhode Island goods on this criterion as well. Major goods shipped include electronic equipment, base metal articles, plastics and rubber, textile and leather articles, and gasoline and aviation turbine fuel.

Of total domestic shipments valued at \$15.3 billion, the NEZ states shipped goods to Rhode Island worth \$4.7 billion or 30.8% of the total.

Massachusetts was dominant as Rhode Island's major supplier, shipping \$2.9 billion in 1997. This is 61.7% of the goods shipped to Rhode Island by the other NEZ states.

Massachusetts was dominant as Rhode Island's

On a tonnage basis, Rhode Island received 20,541,000 tons of goods in 1997. The NEZ states shipped 3,390,000 tons or 16.5% of the total tonnage. Massachusetts accounted for 67.2% of the tonnage that originated in the other NEZ states.

New York's Shipments to Other NEZ-US States

NEW YORK OUTBOUND SHIPMENTS, 1997

Destination State	Value (millions of US\$)	Percent	Tons (thousands)	Percent
Connecticut	5,485	1.9	3,144	1.1
Maine	1,025	0.4	629	0.2
Massachusetts	7,078	2.4	4,521	1.6
New Hampshire	1,041	0.4	448	0.2
New York	122,301	42.1	217,676	77.5
Rhode Island	686	0.2	380	0.1
Vermont	1,452	0.5	3,481	1.2
Total	290,350	100	281,014	100

Source: U.S. Census Bureau, 1997 Economic Census, Transportation - Commodity Flow Survey, Issued December 1999, EC97TCF-NY. Table 7, page 33.
NP=Not Provided.

Of the US\$290.4 billion in total domestic shipments, NEZ states accounted for \$16.8 billion (5.8%). Among NEZ states, Massachusetts was the leading market. Shipments to Massachusetts accounted for 2.4% of total domestic shipments, and 42.3% of total shipments to other NEZ states. However, New York's domestic trading

relationships were more significant with states outside the Northeast Economic Zone. In terms of a proportion of total shipments, New Jersey (7.7%), Pennsylvania (5.7%), Illinois (2.9%), Michigan (2.5%), Ohio (3.1%), Texas (3.3%), and California (4.2%) all had a larger share of New York's shipments than did any single NEZ state.

On a tonnage basis, the NEZ states received 12,603,000 tons of goods from New York in 1997. This represents slightly less than 4.5% of the total tonnage shipped domestically. Massachusetts accounted for 1.6% of total tonnage shipped, and 35.9% of tonnage

NEW YORK INBOUND SHIPMENTS, 1997

Origin State	Value (millions of US\$)	Percent	Tons (thousands)	Percent
Connecticut	13,469	3.9	4,786	1.5
Maine	2,060	0.6	NP	NP
Massachusetts	14,136	4.1	2,144	0.7
New Hampshire	2,162	0.6	1,342	0.4
New York	122,301	35.4	217,676	66.5
Rhode Island	1,192	0.3	252	-
Vermont	2,312	0.7	758	0.2
Total	345,317	100	327,231	100

Source: U.S. Census Bureau, 1997 Economic Census, Transportation - Commodity Flow Survey, Issued December 1999, EC97TCF-NY. Table 8, page 34.
 NP=Not Provided - = zero or less than one unit of measure.

shipped to other NEZ states.

Major products shipped electronic equipment, processed foods, articles of textile and leather, chemical products, and printed products.

Total inbound domestic shipments for New York were worth \$345.3 billion in 1997. The NEZ states shipped goods worth \$35.3 billion or 10.2% of the total. Massachusetts was

the leading state supplier among the NEZ states, shipping \$14.1 billion to New York. In terms of NEZ state shipments, Massachusetts represented 39.9% of the total value. Connecticut was the second largest NEZ state supplier, shipping \$13.5 billion. This accounted for 38.2% of NEZ states' shipment value.

The total domestic tonnage for New York was 327,231,000 tons with the NEZ states accounting for roughly 9,282,000 tons (2.8% of the total). On the basis of tonnage shipped, Connecticut was the leading supplier with 51.6% of the total tonnage shipped by NEZ states.

Province-to-State Trade: NEZ-Canada to NEZ-US

NEZ-Canada, Top 5 Export Industries, 2001 (US\$ millions)	
Semiconductors	\$1,616.8
Refined Petroleum	\$1,541.7
Paper	\$1,093.1
Natural Gas	\$767.1
Aluminum	\$759.1
Top 5 Total	\$5,777.8
Total Exports	\$16,461.4

NEZ-Canada's total exports registered at more than US\$16 billion in 2001. The top five export industries in NEZ-Canada accounted for 35.1% of the total exports in 2001. Quebec alone accounted for 69.3% of exports to NEZ-US in 2001.

The second largest export province was New Brunswick, which accounted for 16.2% of exports in 2001. However, almost all of the NEZ-Canada jurisdictions have industries that contributed to the top five export categories. Semiconductors and

intermediate aluminum products are exported from Quebec; refined petroleum is exported from New Brunswick, Nova Scotia, and Newfoundland; all provinces but PEI export paper products; and natural gas is exported from Nova Scotia.

Significantly, three state markets in NEZ-US accounted for \$8.5 billion or 51.7% of total exports in 2001. New York alone accounted for almost 34% of total exports.

Key Markets in NEZ-US	
State Market	US\$ millions
New York	\$5,589.5
Massachusetts	\$1,587.8
Maine	\$1,328.8

Despite this concentration in three markets, a detailed review of NEZ-Canada exports shows that the export base is diversified among many industries, and supports a broad range of value-added products.

Newfoundland's Exports to the NEZ-US Region

The data for this section was obtained from Strategis, Industry Canada and is available in detailed tables in the appendix. The exports are described by industry (NAICS classification) and for further clarity by product (HS classification). Export values are reported in US dollars.

In the period 1997 – 2001, Newfoundland's exports to NEZ-US rose from US\$266.3 million to US\$600.0 million, an increase of 125.3%. The largest market for Newfoundland is Massachusetts, which accounted for 64.1% of total exports to NEZ-US in 2001. No other single market is as significant in NEZ-US.

Paper Mills	\$64.3
Fishing	\$5.8
Sawmills	\$7.1
Seafood	\$202.8
Refined Petroleum	\$315.2
Top 5 Total	\$595.2
Total Exports	\$600.0
Key Market	Massachusetts \$384.7 million

Connecticut received 2.3% of Newfoundland exports to NEZ-US in 1997, and by 2001 accounted for 11.9%. Maine, which had accounted for 29.1% of Newfoundland's exports in 1997, had slipped to 10.9% by 2001.

There was only a modest improvement in Newfoundland's shipments to New York, which grew from 7.1% to 9.7% over the five-year period. However, the growth in sales to the New York market was an impressive

206.98% over the five-year period, rising from US\$19 million in 1997 to reach more than US\$58.3 million in 2001.

Rhode Island slipped from US\$25.6 million to US\$6.9 million principally because of an inflated profile due to refined petroleum exports in the 1997 – 1999 period. The major non-oil export to Rhode Island was processed seafood, which accounted on average for 53.4% of exports. Excluding refined petroleum sales, seafood accounted for 97.7% of exports in 2000, and 95.1% in 2001.

State	1997	1998	1999	2000	2001
Maine	77,635,691	62,550,976	61,700,398	68,059,502	65,459,115
New Hampshire	7,606,232	11,329,465	11,836,056	16,745,627	12,862,474
Connecticut	6,249,351	137,087	5,991,470	42,737,711	71,133,977
Massachusetts	129,792,985	175,300,909	419,696,870	606,636,725	384,742,174
Vermont	469,439	330,913	3,187,888	717,905	602,581
Rhode Island	25,558,687	12,448,206	9,329,529	6,713,989	6,895,520
New York	18,994,479	28,361,777	16,904,149	29,146,689	58,309,766
Total Exports	266,306,865	290,459,329	528,646,360	770,758,145	600,005,604

Source: Strategis, Industry Canada with data from Statistics Canada.

Newfoundland's exports to NEZ-US are heavily concentrated in five sectors. The top five sectors account for more than 99% of total exports by value. Refined petroleum and seafood products alone represent more than 86% of Newfoundland's total exports.

Newfoundland's Exports to Maine

Exports were worth US\$65.4 million in 2001, declining 15.7% from 1997's value of \$77.6 million. This is accounted for by reduced sales of paper products, and the absence of refined petroleum sales in 2001. Nonetheless, paper products (newsprint) accounted for 90.8% of exports in 1997, rising to 94.5% by 2001. Fish products (crab, fish fillets) represented 2.4% of total exports to Maine in 1997, and 2.7% in 2001.

Newfoundland's Exports to Connecticut

Total exports to Connecticut rose from \$6.2 million to \$71.1 million, an increase of more than 1,038% over five years. Refined petroleum products accounted for \$69.9 million in 2001 or 98.3% of total exports.

The role of refined petroleum is the best indicator of exports in the 1997 – 2001 period. Refined petroleum exports grew by \$63.7 million over the period, while total exports grew by \$64.9 million. No other products accounted for more than 0.56% of total exports in the five year period.

Newfoundland's Exports to New Hampshire

From 1997 to 2001, Newfoundland's exports to New Hampshire increased 69.1%, from \$7.6 million to \$12.9 million. Processed seafood products (frozen crab, frozen fish) represented 85.6% of the total in 2001. This is down from 94.4% in 1997. Total seafood product sales however increased from \$7.2 million in 1997 to \$11.0 million in 2001, an increase of 53.5%.

Sawmill products (dimensional lumber) took up 1.1% of exports in 1997, and 10.4% in 2001. The sawmill industry saw export sales to New Hampshire increase by 1,436.6% over the 1997 – 2001 period, rising from a mere \$86,914 to \$1.3 million. Fishing products on the other hand fell 67.3% from \$324,109 to 106,121 in the same period.

Newfoundland's Exports to Massachusetts

More than 64% of Newfoundland's total exports to NEZ-US are bound for Massachusetts. Exports to Massachusetts reached \$384.7 million in 2001, a 196.4% increase over 1997's total of \$129.8 million.

Refined petroleum products accounted for 20.0% of the total in 1997, and 51.2% in 2001. Seafood products were valued at \$178.4 million in 2001, a rise of 105.4% from 1997. Seafood accounted for 43.4% of total exports in 2001. Fish products on the other hand fell from favour, dropping from \$15.1 million in 1997 to \$3.2 million in 2001.

Exports of products from sawmills and paper mills were worth \$4.2 million in 2001, an increase over the period of \$3.69 million or 87.9%.

Newfoundland's Exports to Rhode Island

In 2001, total exports were valued at \$6.9 million. Seafood products, including frozen fish fillets and crab, processed crab, and fresh fish fillets, accounted for 95.1% of the total, with all other export categories were valued at under \$200,000 each. The value of seafood exports increased \$1.4 million over the period, a rise of 26.5%.

Refined petroleum was a major export for 1997 – 1999. In 1997, it accounted for \$20.1 million of a total of \$25.6 million in exports. The value and proportion declined to \$1.8 million in 1999, and there were no exports recorded in 2000 or 2001.

Newfoundland's Exports to Vermont

Exports to Vermont were valued at \$602,581 in 2001, an increase of 28.4% over 1997. Non-metallic mineral products (principally slate) accounted for \$320,257 or 53.1% of total exports in 2001. Sawmill products represented the next largest export, accounting for \$212,498 or 35.3% of the total.

Newfoundland's Exports to New York

In 2001, total exports were valued at \$58.3 million, an increase of 207% over the 1997 value of \$19 million. Refined petroleum exports represented 82.7% of the total value of exports in 2001. Refined petroleum exports increased steadily throughout the 1997 – 2001 period. Valued at \$5.5 million in 1997, refined petroleum exports were valued at \$48.2 million by 2001.

Seafood products experienced growth of 251.9% over the period, rising from \$1.7 million in 1997 to \$5.9 million in 2001. Products from sawmills realized steady incremental growth, rising from \$60,969 to reach \$1.2 million by 2001. This represented a growth over the five-year period of 1,838% or average annual growth of almost 368%.

Prince Edward Island's Exports to the NEZ-US Region

Prince Edward Island's exports to NEZ-US rose from US\$108.5 million in 1997 to \$173.7 million in 2001, an increase of 60% over the time period.

In terms of their share of PEI's exports to the NEZ-US region, Massachusetts accounted for 53% in 1997, and 48.1% in 2001. Sales to Massachusetts grew by 45.1% to reach \$83.6 million in 2001.

Maine represented 23.4% of exports in 1997, which grew to 26% over the five-year period. The rate of growth in sales to Maine was 78% over the same period. Together, Maine and Massachusetts accounted for \$128.8 million in exports in 2001, or 74.2% of PEI's total exports to NEZ-US.

The third largest market was New York. Representing 9.5% of the NEZ-US market in 1997, New York accounted for 14.1% by 2001. Sales to New York grew by 137.9% to reach \$24.5 million in 2001.

The only market to experience a decline was Rhode Island. Between 1997 and 2001, sales to Rhode Island dropped by 17.6%. Almost all of the decline can be attributed to a reduction in sales of seafood products to the state.

Prince Edward Island Exports to NEZ-US, 1997 – 2001, US\$					
State	1997	1998	1999	2000	2001
Maine	25,376,881	26,463,686	33,585,584	42,270,212	45,198,299
New Hampshire	5,133,209	3,199,359	2,997,675	3,224,306	5,766,279
Connecticut	6,563,747	7,620,023	9,539,852	9,938,676	10,397,995
Massachusetts	57,558,027	65,293,233	88,949,192	102,653,424	83,583,696
Vermont	1,314,665	2,661,318	4,947,864	4,490,283	2,364,807
Rhode Island	2,243,910	1,829,724	1,558,626	5,631,535	1,847,456
New York	10,321,980	13,320,374	14,074,226	24,551,449	24,501,706
Total Exports	108,512,419	120,387,717	155,653,019	192,759,885	173,660,238

Source: Strategis, Industry Canada with data from Statistics Canada.

PEI, Top 5 Export Industries, 2001 (US\$ millions)	
Frozen Food	60.1
Seafood	52.2
Fish Products	12.2
Aquaculture	11.7
Slaughterhouse	3.8
Top 5 Total	\$139.9
Total Exports	\$173.7
Key Market	Massachusetts \$83.6 million

In 2001, Prince Edward Island's top five exports were all fresh and processed food products. These represented 80.5% of its total exports to NEZ-US. The top two exports (frozen French fries and frozen lobster) accounted for 64.7% of its total exports in 2001. The key market was Massachusetts, which accounted for 48.1% of PEI's total exports to NEZ-US.

Prince Edward Island's Exports to Maine

Between 1997 and 2001, PEI's total exports to Maine increased by 78.1%, from US\$25.4 million to \$45.2 million. Sales of PEI's top 25 exports to Maine increased by 82.7%, from \$24.7 million to \$45 million.

Frozen foods (French fries) were the single largest export, increasing from \$12.5 million in 1997 to \$19.6 million in 2001 (an increase of 56.5%). Sawmill exports (sawn lumber) rose impressively from \$580,475 to \$6,222,095 over the five-year period for an increase of 971.9%. Live lobster and fresh chilled mussels were major growth areas as well.

Prince Edward Island's Exports to Connecticut

PEI exports to Connecticut rose 58.4% from \$6.6 million to 10.4 million over the time period. Pharmaceutical and medical products (principally diagnostic and laboratory reagents) were the leading export, accounting for 26% of PEI's total exports to Connecticut in 2001. Organic chemical sales rose steeply, with exports increasing by 221.5% from 1997 to 2001.

Export of slaughterhouse products (fresh and chilled boneless pork cuts) increased in value from \$779,364 in 1998 to \$1,918,518 by 2001, for an increase of 146.2% over four years. With average annual growth of 36.4%, PEI pork products have made a strong impact on the market. Exports of frozen French fries were valued at \$90,645 in 1997, and rose to \$1,218,268 or 1,244% by 2001.

Prince Edward Island's Exports to New Hampshire

Total PEI exports to New Hampshire increased slightly from \$5.1 million in 1997 to \$5.8 million in 2001. Seafood products (mainly lobster) were the leading export, which accounted for 52.5% of total exports in 2001. Seafood sales, however, declined 6.3% over the period. Truck bodies, maple sugar/syrup, plastic products (doors and windows), and French fries were major exports though none was valued at more than \$700,000 in 2001.

Prince Edward Island's Exports to Massachusetts

Between 1997 and 2001, PEI sales to Massachusetts grew from \$57.6 million to \$83.6 million, a rate of 45.2% for the five-year period. Seafood products were valued at \$46.2 million in 2001, representing 55.2% of total exports to the state. In 1997, seafood represented 60.8% of total exports.

The major growth area was sales of frozen French fries, which increased 279%, from \$5.2 million to \$19.6 million over the period. Other significant shipments include aquaculture (mussels), fishing (crab), and animal slaughtering (pork cuts).

Prince Edward Island's Exports to Rhode Island

Between 1997 and 2001, PEI's exports to Rhode Island declined from \$2.2 million to \$1.8 million. The peak year was 2000, when export sales were valued at \$5.6 million. Although still significant at 35.1% of total exports in 2001, seafood product sales fell over the period. The peak year was 2000, when millennium celebration sales pushed seafood exports to \$4.1 million. In 2000, seafood accounted for 73.2% of total exports to Rhode Island. Exports of frozen French fries more than doubled over the period, and accounted for 35.1% of total exports in 2001. However, these sales stood at slightly less than \$649,000 in total.

Prince Edward Island's Exports to Vermont

In 1997, total exports from PEI were valued at \$1.3 million, and in 2001 had reached \$2.4 million, an increase of 80%. Frozen French fries accounted for 62.1% of total exports in 2001. Since 1997, the export of frozen French fries has grown from \$158,866 to \$1,469,743, an increase of 825.1% over the period. This is equivalent to an annual sales increase of more than 165%.

Tobacco products accounted for 16.4% of 2001 exports. Railway vehicle parts accounted for 7.6% of total exports in 2001. Although these are the second and third largest exports respectively, they have both been in decline over the time period.

Prince Edward Island's Exports to New York

By 2001, exports to New York had reached \$24.5 million, an increase of 137.4% over the 1997 total of \$10.3 million. Frozen food exports (French fries) account for \$17.2 million in sales during 2001. This represents 70% of total exports in 2001. In 1997, frozen foods accounted for 20.1% of total exports.

Live fresh and chilled mussels, were the major aquaculture export, which was valued at \$1.2 million in 2001. Mussel sales grew 83.1% over the five-year period. Tablestock potatoes, valued at \$2.1 million in 1997, declined to \$745,134 in 2001, a drop of 64.9%.

Nova Scotia's Exports to the NEZ-US Region

Between 1997 and 2001, the value of Nova Scotia's exports to NEZ-US rose by more than US\$1 billion, or 184.1%. This amounts to an annual increase in export value of 36.8% for the period. In 2001, Massachusetts accounted for 69.7% of the total value of exports, up from 59.9% in 1997. The only export market to experience a slight decline was Vermont, which accounted for 0.8% of exports in 1997 but only 0.3% in 2001.

Nova Scotia Exports to NEZ-US, 1997 – 2001, US\$					
State	1997	1998	1999	2000	2001
Maine	101,071,426	93,013,824	92,726,873	110,249,243	129,833,562
New Hampshire	20,279,015	21,787,783	28,217,291	36,122,670	42,434,017
Connecticut	13,955,572	27,397,512	30,306,946	46,615,829	200,448,423
Massachusetts	338,272,115	331,237,997	369,332,821	955,138,519	1,119,499,572
Vermont	4,539,973	2,907,136	3,299,824	3,289,804	4,238,462
Rhode Island	17,538,598	17,718,752	15,983,210	18,282,890	19,046,816
New York	69,502,868	117,707,578	133,933,408	118,829,227	89,992,836
Total Exports	565,159,567	611,770,582	673,800,373	1,288,528,182	1,605,493,688

Source: Strategis, Industry Canada with data from Statistics Canada.

However, in the regional context, only Connecticut and Massachusetts had a growing share of Nova Scotia exports, with all other states accounting for less than they did in 1997. Connecticut saw its share of Nova Scotia exports rise from 2.5% in 1997 to 12.5% in 2001. As a proportion of total exports to NEZ-US, Nova Scotia exports to Maine dropped from 17.9% in 1997 to 8.1% in 2001. New York experienced a decline from 12.3% to 5.6% over the same period.

Nova Scotia, Top 5 Export Industries, 2001 (US\$ millions)	
Natural Gas	767.1
Fish Products	246.9
Papers	178.8
Lumber	74.4
Refined Petroleum	19.4
Top 5 Total	\$1,286.7
Total Exports	\$1,605.5
Key Market	Massachusetts
	\$1,119.5

In 2001, Nova Scotia's top five exports represented 80.1% of its total exports to NEZ-US. Natural gas was the top export, which accounted for 47.8% of the province's total exports in 2001. The key market was Massachusetts, which accounted for 69.7% of Nova Scotia's total exports to NEZ-US.

Nova Scotia's Exports to Maine

Exports to Maine rose from US\$101.1 million in 1997 to \$129.8 million in 2001, an increase of 28.4%. Fish products (lobster, scallops, haddock) and sawmill products (lumber) were the leading exports. Fish products rose from \$33.5 million to \$45.8 million, an increase of 36.7% over the period. Sawmills exported \$35.3 million worth of lumber, an increase of 242.7% over 1997 exports of \$10.3 million. Frozen foods, processed seafood products, and refined petroleum round out the leading exports to Maine. The top five export industries in Nova Scotia accounted for \$101 million or 72.8% of total exports in 2001.

Nova Scotia's Exports to Connecticut

By 2001, exports to Connecticut had reached \$200.4 million, an increase of 1,336% over 1997. The principal export responsible for this increase is paper products (fine papers, and newsprint), which in 2001 accounted for \$172.5 million or 86% of Nova Scotia exports to the state. Wood pulp, live lobster, and dimensional lumber were also key exports.

Nova Scotia's Exports to New Hampshire

Between 1997 and 2001, exports increased from \$20.3 million to \$42.4 million, an increase of 108.9%. Seafood product sales rose from \$6.5 million to \$12.2 million over the period, an increase of 87.7%. Sawmill products, mainly lumber, rose 67.4% from \$4.3 million to \$7.2 million. Fish product sales, consisting largely of live lobster, rose from \$2.1 million to \$5.7 million, representing an increase of 171.4% over five years.

Other major exports included gypsum, refined petroleum, construction machinery, and other construction materials, such as structural steel.

Nova Scotia's Exports to Massachusetts

Exports to Massachusetts in 2001 were valued at US\$1.1 billion. Since 1997, the value of exports has risen almost 231% in this market. Natural gas exports reached 68.5% of total exports in 2001, having risen from 0.09% in 1997.

Fish products (principally live lobster) accounted for \$161.7 million, and prepared seafood (fillets, frozen crab, scallops) amounted to \$115.6 million in 2001. While fish product sales increased by 24.9%, seafood sales decreased over the period by 1.1%.

Nova Scotia's Exports to Rhode Island

Between 1997 and 2001, Nova Scotia's exports to Rhode Island rose from \$17.5 million to \$19.0 million (an increase of 8.6%).

Seafood product exports increased 66.1% from \$5.6 million to \$9.3 million over the period. Seafood represented 48.7% of total exports in 2001, up from 32.1% in 1997. Fish exports, including fillets, scallops, lobster and crab, were worth \$5.9 million in 2001, and represented 31.0% of total exports. Other commodities of note were synthetic fabrics, sawn lumber, refrigeration equipment, and paperboard.

Nova Scotia's Exports to Vermont

Exports to Vermont decreased 6.7% from \$4.5 million to \$4.2 million over the 1997 – 2001 period. By 2001, dimensional lumber represented 56.3% of exports worth \$2.4 million. Light trucks and other vehicles, as well as seafood products, metalworking machinery, and wood veneers rounded out the major exports.

Nova Scotia's Exports to New York

Nova Scotia exports to New York were valued at \$90 million in 2001, an increase of 29.5% from \$69.5 million in 1997. Fish products, mainly live lobster, increased from \$8.8 million in 1997 to \$22.3 million in 2001. Seafood products (principally packaged fish fillets) increased from \$12.2 million to \$19.8 million in the same period. Export of fresh and processed fish products were worth \$42.0 million in 2001, and represented 46.7% of total exports.

Sawn lumber exports were valued at \$7.8 million in 2001, up by 101.2% from 1997. Among control instrumentation valued at \$4.3 million in 2001, Nova Scotia exported \$3.3 million of parking meters to New York.

New Brunswick's Exports to the NEZ-US Region

New Brunswick's exports to NEZ-US increased by \$906.3 million rising from \$1.8 billion to \$2.7 billion, an increase of 51.2% over the five years from 1997 to 2001.

Maine dominated with a 42.7% share of New Brunswick's exports in 1997. By 2001, Maine's share had increased to \$1.3 billion, representing 49.7% of total exports to NEZ-

US. The Maine market grew by 76.1% over the five years. Massachusetts accounted for 29.2% of total exports in 2001, down from 31.2% in 1997. Nonetheless, sales to

New Brunswick Exports to NEZ-US, 1997 – 2001, US\$					
State	1997	1998	1999	2000	2001
Maine	754,401,000	769,037,000	879,780,000	1,341,519,000	1,328,808,000
New Hampshire	94,104,915	99,875,672	142,683,001	169,930,061	214,548,317
Connecticut	72,110,922	67,997,492	83,910,285	108,346,802	115,884,052
Massachusetts	552,161,771	559,580,542	628,369,837	633,817,077	781,914,791
Vermont	76,717,677	12,864,274	11,355,702	9,255,234	9,825,915
Rhode Island	36,594,426	52,849,455	17,049,417	25,168,467	24,904,438
New York	182,426,000	175,405,000	192,772,000	197,733,000	198,898,000
Total Exports	1,768,516,711	1,737,609,435	1,955,920,242	2,485,769,641	2,674,783,513

Source: Strategis, Industry Canada with data from Statistics Canada.

Massachusetts grew by 41.6% over the period.

New Hampshire's share of exports increased from 5.3% in 1997 to 8.0% in 2001, reflecting 128% growth in New Brunswick's sales to the state. Exports to Connecticut increased by 60.7% over the 1997 to 2001 period, though the share of total exports was marginally higher at 4.3% in 2001 compared to 4.1% in 1997. New York, Vermont and Rhode Island all had a smaller share of total exports in 2001 compared to 1997, reflecting more modest growth in sales. Vermont and Rhode Island had reduced purchases of energy from New Brunswick, which had a significant impact on the province's exports to these states.

NB, Top 5 Export Industries, 2001 (US\$ millions)	
Refined Petroleum	\$1,207.1
Seafood Products	\$276.1
Lumber	\$220.1
Paper Products	\$88.7
Other Manufactured Wood Products	\$28.9
Top 5 Total	\$1,821.0
Total Exports	\$2,674.8
Key Market	Maine \$1,328.8

In 2001, New Brunswick's top five exports mainly were value-added oil, forestry and fishery products. These represented 68.1% of its total exports to NEZ-US. The top export (refined petroleum) accounted for 45.1% of its total exports in 2001. The key market was Maine, which accounted for 49.7% of New Brunswick's total exports to NEZ-US.

New Brunswick's Exports to Maine

Exports to Maine grew by 76.1% over the 1997 to 2001 period to reach US\$1.3 billion. In 2001, refined petroleum accounted for 46.7% of total exports, wood pulp accounted for 11.1%, lumber 10.9%, and electrical energy 9.3%.

Of the top four exports, growth of over 100% was recorded for refined petroleum (111.6%), lumber (105.8%), and electricity (112.3%). Wood pulp exports grew by only 8.6% over the five-year period.

New Brunswick's Exports to Connecticut

Between 1997 and 2001, total exports rose from \$72.1 million to \$115.9 million, an increase of 60.7%. Refined petroleum represented \$31.3 million or 27% of total sales in 2001. Aquaculture products (mainly farmed salmon) were valued at \$21.2 million in 2001, which was 18.3% of the total. Wood pulp sales rose marginally from \$9.0 million to \$9.7 million over the period. On the other hand, frozen food product (French fries) sales more than doubled from \$4.2 million to \$9.6 million in 2001.

Fresh fish products (lobsters, fish fillets) and processed seafood were valued at \$17.5 million in 2001, representing 15.1% of total exports.

New Brunswick's Exports to New Hampshire

Exports increased from US\$94.1 million to \$214.5 million over the 1997 to 2001 period, an increase of almost 128%. Refined petroleum sales reached \$138.1 million in 2001, or 64.4% of total exports. Refined petroleum sales rose by 23.3% over the period. Seafood products (frozen crab and lobster) worth \$42.5 million were exported in 2001, an increase of 191.9% over 1997.

Lumber exports peaked at \$19.8 million in 2000, and fell to \$11.6 million in 2001. This was a decrease from 1997 exports of \$12.9 million. Paper products fell more sharply over the period, dropping by 77.4% from \$13 million in 1997 to 2.9 million in 2001.

New Brunswick's Exports to Massachusetts

Over the 1997 to 2001 period, New Brunswick exports to Massachusetts rose from \$552.2 million to \$781.9 million, an increase of 41.6%. Refined petroleum exports worth \$381.9 million in 2001 accounted for 48.8% of total exports. Seafood products (mainly frozen and processed lobster) accounted for 19.4% of total exports, reaching \$151.7 million in 2001. Lumber sales declined from \$69.5 million in 1997 to 38.7 million in 2001. Sales peaked at \$95.1 million in 1999. Paper products (largely newsprint) experienced growth of 29%, rising from \$27.5 million to \$35.5 million over the period.

Other notable exports included fresh fish, farmed salmon, structural steel, and concrete.

New Brunswick's Exports to Rhode Island

New Brunswick's exports declined from \$36.6 million to \$24.9 million, a decline of 31.9% over the 1997 to 2001 period. Refined petroleum exports fell 58.1% from \$28.1 million to \$11.8 million over the period. Seafood product sales increased from \$4.2 million to \$7.7 million during the period. Lumber exports rose from \$1.6 million to \$2.8 million. Other forestry products, including wood veneers and papers, also increased in value.

New Brunswick's Exports to Vermont

Exports to Vermont decreased from \$76.7 million in 1997 to \$9.8 million in 2001. This result was due almost entirely to electrical energy sales worth \$61.0 million in 1997, with no similar sales reported in later years. However, even when electrical energy sales are left out of the calculation, exports fell from \$15.7 million to \$9.8 million or 37.3%. Paper and wood veneer exports fell from \$6.7 million to less than \$700,000 by 2001. Overall, New Brunswick's top twenty-five exports ended the period 21.3% lower than in 1997.

The top two exports were lumber and glass bottles. In 2001, these goods accounted for 40.5% and 10.5% of total exports, respectively. Lumber exports grew by 9.6% from \$3.6 million to almost \$4.0 million. Glass bottles and products rose more than 2,177% from \$45,485 to over \$1.0 million during the period. Other major exports in 2001 were shakes and shingles, and maple syrup.

New Brunswick's Exports to New York

Between 1997 and 2001, New Brunswick's exports to New York grew by 9.0% from \$182.4 million to \$198.9 million. Wood pulp accounted for 20.1% of total exports in 2001, and paper products represented 15.3% of the total. Refined petroleum, aquaculture products (mostly farmed salmon), and lumber were among the other top exports.

Quebec's Exports to the NEZ-US Region

Between 1997 and 2001, Quebec's total exports to NEZ-US increased from US\$10.9 billion to US\$11.4 billion. This represents growth of only 4.5% over the period. However, growth in exports to Connecticut was 26.7% reaching US\$763.6 million in 2001. Similarly, Quebec's sales to New Hampshire rose from \$272.3 million to \$474.3 million, an increase of 74.2% over the period. Most other markets showed modest gains over the period. Sales to Vermont fell \$629.1 million, a drop of 19.8% over the period.

Quebec Exports to NEZ-US, 1997 – 2001, US\$ (thousands)					
State	1997	1998	1999	2000	2001
Maine	454,162	428,257	433,490	509,045	464,328
New Hampshire	272,319	295,815	351,320	413,761	474,389
Connecticut	602,902	555,795	533,631	885,824	763,605
Massachusetts	1,226,966	1,244,288	1,358,356	1,570,497	1,405,162
Vermont	3,183,701	3,027,263	3,027,416	3,161,989	2,554,571
Rhode Island	138,074	133,697	149,998	157,678	155,842
New York	5,033,501	5,458,651	6,315,661	7,622,919	5,589,477
Total Exports	10,911,625	11,143,766	12,169,872	14,321,713	11,407,374

Source: Strategis, Industry Canada with data from Statistics Canada.

Quebec, Top 5 Export Industries, 2001 (US\$ millions)	
Semiconductors	\$1,616.8
Paper	\$761.3
Aluminum	\$759.1
Electricity	\$448.0
Lumber	\$334.3
Top 5 Total	\$3,919.4
Total Exports	\$11,407.4
Key Market	New York \$5,589.5 million

In 2001, Quebec's top five exports were represented 34.4% of its total exports to NEZ-US. The top export industry (mostly sales of integrated circuits) accounted for 14.2% of its total exports in 2001. The key market was New York, which accounted for 49.0% of Quebec's total exports to NEZ-US in 2001.

Quebec's Exports to Maine

Exports to Maine grew by 2.2% in 1997 – 2001, rising from \$454.2 million to \$464.3 million. Wood pulp accounted for 27% of the total in 1997, and 25.5% in 2001. Lumber, electrical energy, inorganic chemicals, papers, and Portland cement were among the major export goods.

Quebec's Exports to Connecticut

Exports to Connecticut increased from \$602.9 million in 1997 to \$763.6 million in 2001. The single most important export was aerospace products (principally aircraft, and turbojets) valued at \$186.8 million in 2001, which accounted for 24.5% of total exports. Other key exports included copper cathodes, intermediate aluminum products, newsprint and other paper products. Though non-ferrous metal sales declined by 26% over the period to \$81.2 million, aluminum product sales rose 861% from 8.2 million to \$78.9 million. Paper products increased 27.4% from \$57.7 million to \$73.5 million over the period.

Quebec's Exports to New Hampshire

In 2001, exports to New Hampshire reached \$474.4 million, an increase of 74.2% over 1997. Electrical energy represented 12.7% of the total in 2001. Lumber accounted for 9.6% of the total, and was valued at \$45.5 million in 2001.

The next largest exports were processed beef and pork cuts, rolled steel wire, paper products, and intermediate aluminum products such as aluminum bars, rods, and wire. Taken together these goods accounted for \$88.8 million or 18.7% of total exports.

Quebec's Exports to Massachusetts

The value of total exports to Massachusetts grew by 14.5%, rising from \$1.2 billion in 1997 to \$1.4 billion in 2001. Paper products (mostly newsprint) in 2001 were valued at \$233.4 million and represented 16.6% of total exports to Massachusetts. Although lumber exports fell by 28.5% since 1997, they were the second largest export valued at \$107 million. Despite the decline, lumber still accounted for 7.6% of total exports in 2001. Other leading exports included fabricated steel structures, ornamental products, and electronic components (mainly integrated circuits).

Quebec's Exports to Rhode Island

Exports were valued at \$155.8 million in 2001, an increase of 12.9% over the \$138.1 million recorded in 1997. Refined non-ferrous metal (principally unwrought silver) was the leading export valued at \$21.3 million in 2001. Printing (such as advertising materials and catalogues) was valued at \$14.7 million, prepared seafood (mainly frozen crab), was valued at \$12.1 million, and paper products (mostly newsprint) at \$10.7 million. These products jointly accounted for 37.8% of the total value of exports in 2001.

Quebec's Exports to Vermont

Total exports to Vermont fell from \$3.2 billion in 1997 to \$2.6 billion in 2001 (a decline of 19.8%). Electronic component sales (integrated circuits) fell 26.1%, or a decline of \$499 million over the period. Valued at \$1.4 billion in 2001, electronic components represented 55.3% of total exports.

Men's clothing sales dropped from \$145.8 million to \$120.6 million over the period. As the second largest export, men's clothing accounted for 4.7% of total exports in 2001. Similarly, electrical energy exports recorded a decline from \$312.3 million to \$110.9 million (a drop of 64.5%). Other leading exports to Vermont included refined petroleum products, chocolates, and metal valves.

Quebec's Exports to New York

Quebec's exports to New York reached \$5.6 billion in 2001, a rise of 11% over 1997. Quebec's top twenty-five exports account for over 69% of total exports. The top five exports in 2001 were worth \$1.7 billion and accounted for 31% of total exports. These key exports included a broad range of products, such as intermediate aluminum products, newsprint, electrical energy, parts for telephones, and extruded copper wire.

State-to-Province Trade: NEZ-US Exports to NEZ-Canada

NEZ-US Exports to Atlantic-Canada, 1997 – 2001, US\$					
Province	1997	1998	1999	2000	2001
Newfoundland	17,050,830	7,985,436	9,230,616	28,568,011	24,690,273
Prince Edward Island	1,535,560	1,503,120	875,107	1,113,644	748,727
Nova Scotia	51,334,050	69,722,773	65,070,372	87,556,702	56,793,630
New Brunswick	325,306,157	335,209,291	417,695,290	468,084,903	468,681,542
Quebec	5,089,187,233	5,028,498,174	5,022,973,506	5,169,110,901	4,071,020,016
Total Exports	5,484,413,830	5,442,918,794	5,515,844,891	5,754,434,161	4,602,372,588

NEZ-US, Top 5 Export Industries, 2001 (US\$ millions)	
Semiconductors	\$889.8
Aerospace	\$350.4
Logging	\$302.9
Paper Mills	\$149.3
Computers & Peripherals	\$131.7
Top 5 Total	\$1,824.2
Total Exports	\$4,602.3

By 2001, total exports from the NEZ states to the NEZ provinces amounted to US\$4.6 billion. The value of total exports fell by 16.1% between 1997 and 2001. However, recessionary conditions at the beginning of 2001 and the immediate impact of the September 11 attacks dampened business activity late in the year. Calculated from the peak year of 2000, exports rose by 4.9% since 1997.

In 1997, Quebec accounted for 92.8% of total imports of \$5.5 billion from the NEZ states. In 2000 Quebec's share fell to 89.8%, and by 2001, Quebec's share had fallen to 88.5%. In New Brunswick's case, share of imports was 5.9% in 1997, and rose to 10.2% by 2001. Nova Scotia also rose from .94% to 1.2% of total imports by 2001. Newfoundland rose from 0.31% to 0.54% in the same period.

The top 5 exports from NEZ-US amount to 39.6% of total exports to the NEZ-Canada provinces. Not including semiconductors, Quebec accounted for \$846.0 (46.4%) million of the top 5 exports. All exports of semiconductors went to Quebec, giving the province a total share of \$1,735.9 million or 95.2% of top 5 exports to the NEZ provinces. Quebec accounted for 88.5% of total exports from NEZ states in 2001.

Key Markets in NEZ-Canada	
Provincial Market	US\$ millions
Quebec	\$4,071.0

In reviewing export markets for NEZ states apart from Quebec, most exports were focused on a few specific provinces. Aerospace exports were targeted to Newfoundland and Nova Scotia. Logging and paper mills were focused on New Brunswick. Computers and peripherals went to Prince Edward

Island, Nova Scotia, and New Brunswick.

NEZ State Performance

Maine Total Exports

Maine accounted for 13.9% of total exports to NEZ-Canada in 2001, up from 8.6% in

Province	1997	1998	1999	2000	2001
Newfoundland	274,428	137,990	843,945	172,335	1,009,362
Prince Edward Island	147,805	612,316	141,034	94,687	81,109
Nova Scotia	1,915,631	916,967	1,144,772	1,046,888	1,034,512
New Brunswick	204,508,210	186,709,236	248,337,853	315,874,363	331,296,954
Quebec	262,366,000	256,804,000	290,906,000	331,227,000	306,834,000
Total Exports	469,212,074	445,180,509	541,373,604	648,415,273	640,255,937

1997. Maine has concentrated its export focus on Quebec and New Brunswick, which together accounted for 99.5% of the states total exports to NEZ-

Canada in 1997. By 2001, the two provinces accounted for almost 99.7% of Maine's exports. Over the 1997 to 2001 period, exports to New Brunswick rose almost 62% from US\$204.5 million to \$331.3 million. In Quebec's case, the value of exports rose 16.9% over the period.

Maine's leading exports to Canada are lumber and wood products, fishing, paper and allied products, electronic and electric equipment, and industrial machinery and computers⁵.

New Hampshire Total Exports

Province	1997	1998	1999	2000	2001
Newfoundland	58,828	245,206	269,702	74,378	105,289
Prince Edward Island	171,174	122,990	120,251	74,991	76,917
Nova Scotia	5,133,133	6,376,805	6,154,400	6,325,932	1,845,982
New Brunswick	11,802,386	13,029,677	14,688,920	16,573,611	15,722,019
Quebec	173,915,000	193,856,000	212,068,000	256,505,000	201,221,000
Total Exports	191,080,521	213,630,678	233,301,273	279,553,912	218,971,207

Total exports increased from US\$191.1 million in 1997 to \$218.9 million in 2001 for an increase of 14.6%. Exports to Quebec increased by 15.7% over the

period. Sales to Quebec accounted for 91.2% of total exports to the NEZ provinces in 2001. Exports to New Brunswick rose 33.2% over the period. Exports to Nova Scotia declined more than 64% over the period, and those to PEI fell 55.1%.

⁵ Maine Exports 2000, Massachusetts Institute For Social And Economic Research , University Of Massachusetts, Amherst, page 29

New Hampshire ships a diverse mix of high-tech, traditional manufactured goods, and natural resources to Canada. Electronic and electric equipment and industrial machinery and computers are the primary and fastest growing export industries by far, followed by rubber and miscellaneous plastics products and lumber and wood products⁶. Export shipments from New Hampshire's leading export industry, industrial machinery and computers, are dominated by high-tech commodities including computer parts, computers, and printing machinery and parts. It is this segment of the export industry that accounts for the trade relationship with Quebec.

Connecticut Total Exports

Between 1997 and 2001, total export sales rose by 0.9%. Although Quebec was the major market, accounting for 90.7% of total sales in 2001, exports to Quebec declined from \$460.3 million to \$456.4 million over the period.

Exports to Nova Scotia increased by almost \$15 million or nearly 107% over the period. Sales to Newfoundland dropped by 95% between 1997 and 2001, from more than \$8 million to less than \$500,000.

Province	1997	1998	1999	2000	2001
Newfoundland	8,059,639	433,897	1,581,513	411,782	399,157
Prince Edward Island	78,310	57,554	32,217	157,502	59,721
Nova Scotia	13,774,743	28,354,144	12,119,325	34,516,121	28,509,891
New Brunswick	16,279,855	30,371,877	32,090,783	21,093,649	17,576,482
Quebec	460,308,000	465,877,000	449,583,000	470,514,000	456,378,000
Total Exports	498,500,547	525,094,472	495,406,838	526,693,054	502,923,251

Of the leading industries shipping to Canada, machinery and computers, fabricated metals, and electronics grew the fastest. Connecticut had declines in

exports of rubber and plastics, chemicals, metal mining, and agricultural commodities⁷.

Massachusetts Total Exports

Total exports fell by almost 11% between 1997 and 2001. Over 96% of the decline was attributable to a drop in shipments to Quebec. Exports to Quebec dropped by 11.5% to \$764.5 million in 2001.

Exports to Nova Scotia also fell over the period, dropping by \$7.5 million or 43.5%. Exports to PEI and Newfoundland dropped as well. The only market to show any

⁶ New Hampshire Exports 2000, Massachusetts Institute For Social And Economic Research , University Of Massachusetts, Amherst, page 29

⁷ Connecticut Exports 2000, Massachusetts Institute For Social And Economic Research , University Of Massachusetts, Amherst, page 30.

Province	1997	1998	1999	2000	2001
Newfoundland	3,516,128	1,294,193	616,493	1,654,006	1,402,518
Prince Edward Island	852,063	257,645	342,532	551,550	264,512
Nova Scotia	17,194,464	16,750,093	19,751,291	10,977,518	9,720,906
New Brunswick	53,479,101	52,850,187	67,544,926	69,365,679	59,826,212
Quebec	863,878,000	888,843,000	1,013,050,000	1,084,367,000	764,534,000
Total Exports	938,919,756	959,995,118	1,101,305,242	1,166,915,753	835,748,148

increase was New Brunswick, which was worth \$59.8 million in 2001. Overall, exports to New Brunswick grew by 11.9%.

Exports of Massachusetts' two leading industries to Canada, industrial machinery and computers and electronics, declined from 1996-1999⁸. This pattern contributed to the overall decline in exports to NEZ provinces, namely Quebec.

Vermont Total Exports

Vermont's exports to each NEZ province dropped over the 1997 to 2001 period. Total exports fell by \$753.1 million or 49.8%. Metal oxide semiconductor shipments (MOS integrated circuits) are a key export from Vermont to Canada. However, Vermont has been under severe competitive pressure in the Canadian market from both California and Asian sources of semiconductors⁹.

Province	1997	1998	1999	2000	2001
Newfoundland	48,609	21,176	44,329	313,261	33,907
Prince Edward Island	78,678	-	-	17,900	5,369
Nova Scotia	138,986	108,448	203,052	203,176	95,550
New Brunswick	6,360,633	5,284,186	3,029,513	1,464,940	1,678,939
Quebec	1,506,320,000	1,499,112,000	1,431,352,000	1,256,833,000	758,041,000
Total Exports	1,512,946,906	1,504,525,810	1,434,628,894	1,258,832,277	759,854,765

⁸ Massachusetts Exports 2000, Massachusetts Institute For Social And Economic Research , University Of Massachusetts, Amherst, page 30

⁹ Vermont Exports 2000, Massachusetts Institute For Social And Economic Research (MISER), University Of Massachusetts Amherst, page 30. Although Vermont's reliance on Canada as an electronics purchaser is declining gradually, MISER notes that when Vermont electronics exports to Canada fell 17% from 1999-2000 it resulted in very slow overall state export growth of 1.9%. In 2001, IBM reduced production at its major Vermont facility.

Quebec was the single most important export market, which accounted for 99.8% of total exports.

Rhode Island Total Exports

Total exports fell from \$98.9 million in 1997 to \$97.4 million in 2001, a drop of 1.5% over the period. PEI was the only market to register an increase in exports from Rhode Island, but the amount was negligible.

Province	1997	1998	1999	2000	2001
Newfoundland	56,779	121,096	57,688	83,763	4,872
Prince Edward Island	14,380	3,982	2,779	44,857	32,497
Nova Scotia	924,736	3,096,034	5,260,484	1,497,363	768,488
New Brunswick	7,808,490	6,173,751	9,083,021	6,562,524	7,509,365
Quebec	90,103,233	96,870,174	94,686,506	98,961,901	89,084,016
Total Exports	98,907,618	106,265,037	109,090,478	107,150,408	97,399,238

According to MISER, Rhode Island's electronics exports are the fastest growing of the leading industries, followed by chemicals and scrap and waste¹⁰.

Quebec accounted for 91.9% of total exports in 1997, and 91.5% in 2001.

New York Total Exports

Total exports to NEZ provinces amounted to \$1.5 billion in 2001, a drop of 12.8% from 1997. Quebec was the dominant market, accounting for 96.6% of total exports to NEZ-Canada.

There were increases in exports to Nova Scotia and New Brunswick over the period. Sales to Nova Scotia rose to \$14.8 million, an increase of 20.9%. Exports to New Brunswick amounted to \$35.1 million in 2001, an increase of 39.9% over 1997.

Province	1997	1998	1999	2000	2001
Newfoundland	5,036,419	5,731,878	5,816,946	25,858,486	21,735,168
Prince Edward Island	193,150	448,633	236,294	172,157	228,602
Nova Scotia	12,252,357	14,120,282	20,437,048	32,989,704	14,818,301
New Brunswick	25,067,482	40,790,377	42,920,274	37,150,137	35,071,571
Quebec	1,732,297,000	1,627,136,000	1,531,328,000	1,670,703,000	1,494,928,000
Total Exports	1,774,846,408	1,688,227,170	1,600,738,562	1,766,873,484	1,547,220,042

¹⁰ Rhode Island Exports 2000, Massachusetts Institute For Social And Economic Research, University Of Massachusetts, Amherst, page 29

Exports of telecommunications apparatus, telecommunications parts, and metal oxide semiconductors produced the largest increases in exports to Canada¹¹.

NEZ-US Exports to Newfoundland

NEZ-US exports to Newfoundland reached \$24,690,273 in 2001. The single largest source of exports was New York, which had sales worth \$21,735,168 to Newfoundland in 2001. New York's share of the total amounted to 88.0%.

Maine's Exports to Newfoundland

Since 1997 Maine's exports to Newfoundland have risen 267.8% to US\$ 1.0 million in 2001. Aerospace parts (aircraft engines) were exported in 2001, and accounted for 63.6% of total exports. Distillery products (mainly cordials and liqueurs) were exported worth \$2,877 in 1997, which rose sharply to more than \$249,000 in 2001. All other export categories were valued at less than \$100,000 each in 2001.

New Hampshire's Exports to Newfoundland

New Hampshire's exports to Newfoundland were negligible over the period. Total exports were valued at \$105,289 in 2001. Exports peaked at almost \$270,000 in 1999. paper making machinery represented 63.9% of total exports in 2001.

Connecticut's Exports to Newfoundland

Total exports fell from \$8.1 million in 1997 to \$0.4 million in 2001. Industrial machinery and parts for machines accounted for 54.6% of total exports, and broadcasting equipment (fax and other communications equipment) accounted for 28% of the total in 2001.

Massachusetts' Exports to Newfoundland

Exports from Massachusetts fell from \$3.5 million to \$1.4 million over the 1997 – 2001 period. The computer and peripheral equipment industry accounted for 47.3% of total exports in 2001. Products used in seafood preparation and packaging represented 47.4% of total exports in 1997. By 2001, they accounted for 26.1% of the total.

Vermont's Exports to Newfoundland

Exports fell from \$48,600 to \$33,900 over the period. Testing instruments accounted for 89.9% of total exports in 2001.

¹¹ New York Exports 2000, Massachusetts Institute For Social And Economic Research, University Of Massachusetts, Amherst, page 30

Rhode Island's Exports to Newfoundland

Rhode Island's exports peaked in 1998 at \$121,000, and fell to less than \$5,000 in 2001. Navigation instruments (radar apparatus) accounted for almost the entire amount (88.6%).

New York's Exports to Newfoundland

Exports rose from \$5.0 million to \$21.7 million over the period (an increase of 331.6%). Refined petroleum sales increased from \$4.0 million in 1997 to \$12.5 million in 2001. The second largest export was scrap pulp paper valued at \$5.6 million in 2001. Basic organic chemicals accounted for \$3.0 million in 2001. These top three exports represented \$21.2 million or 97.4% of the total in 2001.

NEZ-US Region's Exports to Prince Edward Island

NEZ-US recorded exports valued at \$748,727 in 2001. The single largest source of exports to PEI was Massachusetts. In 2001, Massachusetts accounted for \$264,512 or 35.3% of total exports from NEZ-US to PEI.

Maine's Exports to Prince Edward Island

From 1997 to 2001, exports fell by 45% from \$147,800 to \$81,100. Distillery products accounted for 48.7% of total exports in 2001. Curtains and linens accounted for 25.6% of the total.

New Hampshire's Exports to Prince Edward Island

Between 1997 and 2001, New Hampshire's exports to PEI dropped by 55.1% to almost \$77,000 in 2001. This is attributable largely to a decline in electrical equipment sales (couplings and brakes) of 91.5% from \$66,500 to \$5,700.

Connecticut's Exports to Prince Edward Island

Exports fell 23.7% over the period to almost \$60,000 in 2001. Exports covered a wide range of goods, with no industry amounting to more than \$15,000 in sales.

Massachusetts' Exports to Prince Edward Island

Exports fell from \$852,000 in 1997 to \$264,500 in 2001 (a decrease of 69%). Power transmission equipment (gear boxes, torque converters and parts) was valued at \$139,000 in 2001, or 52.65 off total exports. Computer equipment (computer systems, parts and accessories) sales grew over the period, and accounted for more than \$60,000 or 23.0% of exports in 2001.

Vermont's Exports to Prince Edward Island

Exports peaked in 1997 at \$78,678, and fell to just over \$5,000 in 2001.

Rhode Island's Exports to Prince Edward Island

Total exports to PEI rose from \$14,3800 to \$32,497 (126%) over the 1997 – 2001 period. Office furniture accounted for 66.3% of the total in 2001.

New York's Exports to Prince Edward Island

Exports to PEI reached \$228,600 in 2001, an increase of 18.4% over 1997. Nursery and floriculture production (flower bulbs) was the leading export, valued at over \$92,000 in 2001. It accounted for 40.3% of total exports in 2001. Measuring instrumentation accounted for 24.9% of exports.

NEZ-US Region's Exports to Nova Scotia

Total exports to Nova Scotia from NEZ-US amounted to \$56,793,630 in 2001. Connecticut was the principal source of exports, which were valued at \$28,509,891 or 50.2% of the total in 2001.

Maine's Exports to Nova Scotia

Exports fell from \$1.9 million in 1997 to \$1.0 million in 2001. Distillery products (liqueurs and cordials) accounted for 2.6% of exports in 1997, and grew to 37.6% of total exports by 2001. Fishing (primarily fresh cod) accounted for 50.6% of exports in 1997, but dropped to 15.1% in 2001.

Over the period, construction machinery sales grew by 1,458%, agricultural implements (combine harvesters) rose by 2,998%, and other industrial machinery (printing machinery) increased by 16.9% of total exports. These three industries combined represented only \$174,428 or 16.9% of total exports in 2001.

New Hampshire's Exports to Nova Scotia

New Hampshire exports ended the period at \$1.8 million, which was down from the 1997 export total of \$5.1 million. The leading export was motor vehicle electrical equipment (mostly signaling equipment), which accounted for 50.1% of total exports in 2001. Other fabricated metal products dropped from \$4.3 million to \$58,000 over the period. Seafood products, measuring instrumentation, and other electrical equipment (electric converters) all had sales in 2001 over \$100,000.

Connecticut's Exports to Nova Scotia

Exports to Nova Scotia reached \$28.5 million in 2001, up from \$13.8 million in 1997 (an increase of 107%). Refined petroleum has assumed a large share of total exports. In 2001,

they represented 88.8% of total exports. Other key exports included motor vehicle equipment (signaling equipment), aerospace parts, and other electrical equipment.

Massachusetts' Exports to Nova Scotia

From \$17.2 million in 1997, exports fell to \$9.7 million in 2001 (a 43.5% decline). Aerospace product (turbo-jets and turbo-propellers) sales were worth \$3.1 million in 2001, up 28% from 1997. Computer and data processing equipment and parts sales increased from just over \$500,000 to \$2.7 million by 2001. Telephone sets and electrical parts for telephone systems rose from \$25,000 to \$446,000 over the period. Measuring instruments, other fabricated metal products (ammunition), and fishing (fresh cod and lobsters) lead other exports from Massachusetts.

Vermont's Exports to Nova Scotia

Vermont's exports to Nova Scotia declined 31.3% over the five-year period. With total exports under \$100,000 in 2001, ceramic fixtures (insulating electrical fittings) represented 58.7% of the total. Other export products included small amounts of printed brochures, industrial machinery, sporting goods (exercise equipment), and other fabricated metal products (mainly ball bearings).

Rhode Island's Exports to Nova Scotia

Export sales fell 16.9% to \$768,000 over the 1997 to 2001 period. General-purpose machinery accounted for 35.7% of exports in 2001. Pumps and compressors accounted for 23.8% of exports in 2001.

New York's Exports to Nova Scotia

Exports grew 20.9% from \$12.3 million in 1997 to \$14.8 million in 2001. Measuring equipment was valued at \$3.2 million in 2001, or 21.5% of total exports. In 2001, electrical equipment reached \$1.8 million in 2001 and accounted for 11.9% of total exports; electrical wiring devices were valued at \$1.4 million, and represented 9.7% of exports, and other petroleum products (coke) at almost \$1.4 million to account for 9.4% of total exports.

NEZ-US Region's Exports to New Brunswick

NEZ-US exported \$468,681,542 in 2001 to New Brunswick. The major export origin was Maine, which accounted for \$331,296,954 of exports in 2001. The Maine share represented 70.7% of total exports to New Brunswick.

Maine's Exports to New Brunswick

Between 1997 and 2001, exports grew by 62.0%. The total value of exports in 2001 was \$331.3 million. In 2001, fishing (fresh lobster) alone represented \$111.1 million or 33.5%

of total exports. Logging (telephone poles, fence posts) rose from \$21.0 million to \$58.0 million, an increase of 175.8% over the period. Aquaculture (fresh salmon) sales increased from \$14.3 million to \$30.0 million, a rise of 109.6% over the period.

Sawmill products (wood chips, lumber), paper products (writing papers), fruit (fresh cranberries), and seafood were other key exports.

New Hampshire's Exports to New Brunswick

Exports grew 33.2% from 1997 to 2001, totaling \$15.7 million in 2001. Seafood accounted for 25.1% of the total in 2001. Other leading exports included sawmill products (lumber), industrial machinery (pulp and paper machinery), refined petroleum (propane), and fishing (lobster, scallops).

Connecticut's Exports to New Brunswick

Exports peaked in 1999 at \$32.0 million, and settled at \$17.6 million in 2001. Over the five-year period, total exports grew almost 8.0%. Paper (sanitary products) generated exports worth \$2.3 million in 2001, accounting for 13.0% of total exports.

Other major exports included explosives manufactures (detonating fuses and caps), bakery goods (dough and mixes), and metal containers (tanks, drums, and casks).

Massachusetts' Exports to New Brunswick

Between 1997 and 2001, exports grew by 11.9%, reaching \$95.8 million in 2001. Seafood products were valued at \$11.3 million in 2001, or 18.9% of total exports. Other major exports in 2001 included \$5.4 million of product from the fishing industry (lobster, crab, herring, cod); \$4.9 million worth of paper (kraftliner paper and scrap paper); wire products valued at \$ 2.9 million; and clothing worth \$2.0 million.

Vermont's Exports to New Brunswick

Exports from Vermont were worth \$6.4 million in 1997, but fell to \$1.7 million in 2001. The largest decline is attributable to cement and plastering materials. In 1997 Vermont sold \$4.0 million worth of product to New Brunswick, but the sales value had fallen to less than \$50,000 by 2001.

The top export in 2001 was metalworking machinery valued at \$333,000 or 19.8% of total exports. Other top exports included construction machinery (track laying tractors), scrap paper, and general-purpose machinery (restaurant equipment).

Rhode Island's Exports to New Brunswick

Exports peaked at \$9.1 million in 1999. Over the five-year period, total exports fell marginally from \$7.8 million in 1997 to \$7.5 million in 2001.

The top three exports were seafood, fishing products (mostly crab), and industrial rubber products. Taken together, these three export categories accounted for almost \$5.0 million or 66.2% of total 2001 exports.

New York's Exports to New Brunswick

By 2001, exports were valued at \$35.1 million, up from \$25.1 million in 1997 (an increase of 39.9%). Petroleum coke accounted for \$3.6 million or 10.3% of total exports in 2001. Refrigeration equipment, glass products (bottles and jars), paper products (household products, printed labels), and metal valves rounded out the top exports. These top five export industries were valued at \$8.9 million or 25.4% of total exports in 2001.

NEZ-US Region's Exports to Quebec

NEZ-US exported \$4,071,020,016 to Quebec in 2001. The single largest contributor to total exports was New York, which had sales of \$1,494,928,000. New York's share represented 36.7% of total exports to Quebec.

Maine's Exports to Quebec

Maine's exports to Quebec were valued at US\$262.4 million in 1997, and \$306.8 million in 2001. Logging industry exports accounted for \$138.8 million in 2001, or 45.2% of total exports.

Paper products, lumber, computer equipment, wood chips and wood pulp were among the top export goods. The top five export industries had sales valued at \$234.8 million in 2001, or 76.5% of total exports.

New Hampshire's Exports to Quebec

Between 1997 and 2001, New Hampshire's exports to Quebec grew from \$173.9 million to \$201.2 million, an increase of 15.7%. The logging industry was the leading exporter in 2001, accounting for 8.4% of total exports. Sawmill products (lumber, paper), industrial machinery (printing machinery, paper-making machinery), electronic components (printed circuits, electrical panels), and aerospace products (turbojet parts) rounded out the top five exports. Together, the top five exports accounted for sales of \$74.5 million or 37.0% of total exports in 2001.

Connecticut's Exports to Quebec

Exports declined from \$460.3 million in 1997 to \$456.4 million in 2001. The aerospace industry was the leading exporter with products and parts (turbojets, airplane parts, aircraft seats) worth \$105.0 million in 2001. This represented 23.0% of total exports.

Measuring (medical) instruments, toilet preparations (hair sprays), refined petroleum, and paper products (sanitary products, beverage containers, scrap paper) were the leading

exports. The top five export industries had sales worth \$196.0 million in 2001, which accounted for 42.9% of total exports.

Massachusetts' Exports to Quebec

Exports in 2001 were worth \$764.5 million, a decline of 11.5% from exports valued at \$863.9 million in 1997. Aerospace products (turbojets and parts) accounted for \$176.4 million in 2001, or 23.1% of total exports.

The other leading export industries were computer equipment (computer systems, parts, storage devices), measuring equipment, semiconductors, and broadcasting equipment. The top five industries had exports valued at \$325.9 million or 42.6% of total exports in 2001.

Vermont's Exports to Quebec

Vermont's exports to Quebec declined from \$1.5 billion in 1997 to \$758.0 million in 2001. Semiconductor industry sales fell from \$1.3 billion to \$478.2 million during the period. This steep decline was attributable to a decline in sales of digital integrated circuits by the semiconductor industry from \$1.3 billion to \$462.0 million. Other key exports included logging (logs for pulp), aerospace products (airplanes), paper products (coated writing paper), and bolts and screws. The top five exports accounted for \$573.3 million or 75.6% of total exports in 2001.

Rhode Island's Exports to Quebec

Exports of \$90.1 million in 1997 peaked at \$99.0 million in 2000. In 2001, exports were valued at \$89.1 million. Scrap precious metal accounted for \$30.5 million, or 34.2% of total exports in 2001. Other key export industries were glass products (tubes, eyeglasses, protective goggles), non-ferrous metals (silver, copper), medical equipment and supplies, and plastic products (stoppers and closures, various plastic articles). The top five export industries had sales valued at \$48.2 million representing 54.1% of total exports in 2001.

New York's Exports to Quebec

Exports fell from \$1.7 billion in 1997 to \$1.5 billion in 2001. The top twenty-five export industries increased sales in the same period from \$807.6 million to \$851.1 million. The leading export industry was electronic components (mainly printed circuits) worth \$355.4 million or 23.8% of total exports in 2001. Other key export industries were logging (raw logs), computer equipment, broad woven fabric (worsted fabrics), and electrical components (panels, plugs and sockets, capacitors, and switches). The top five export industries accounted for \$520.5 million in sales to Quebec, or 34.8% of total exports in 2001.

Province-to-Province Trade: Movement of Goods within NEZ-Canada¹²

Newfoundland's Interprovincial Trade

In 1998, Newfoundland exported C\$1.3 billion in goods and services to other provinces and imported C\$4.6 billion from the rest of Canada. During the period 1992 through 1998, its interprovincial exports and imports both rose in value, increasing 28.9% and 19.2%, respectively. Newfoundland experienced trade deficits with every province, and only recorded minor surpluses with the territories in 1998.

The majority of Newfoundland's interprovincial sales went to Quebec, Ontario, Nova Scotia, and New Brunswick. These four provinces were also Newfoundland's primary sources of imports.¹³

Quebec was the province's dominant domestic export market, accounting for C\$420 million (33%) of its total interprovincial exports. Ontario accounted for C\$2.2 billion (47.2%) of Newfoundland's interprovincial imports in 1998. Exports to Quebec represented 35.6% of imports from Quebec. Exports to Ontario were only 17.2% of imports from Ontario, indicating a more severe deficit with the latter province.

Outside Central Canada, the key trade relationships were with Nova Scotia and New Brunswick. Newfoundland exported C\$197 million (15.5% of domestic sales) to Nova Scotia and imported C\$496 million (10.7% of domestic purchases) from the province. In addition, Newfoundland shipped goods and services worth C\$105 million to New Brunswick (8.3% of interprovincial exports) and bought C\$361 million (7.8% of interprovincial imports) in return.

Interprovincial exports and imports combined grew 21.4%, from C\$4.9 billion in 1992 to C\$5.9 billion in 1998. This is a very modest year-over-year rate for the six years of 3.6%. The Canadian national increase was 32.4% or about 5.4% per annum.

There is no data available for 1992 – 1998 breaking out Newfoundland's interprovincial exports of goods and services. Metal ores, transportation and storage, communications services, and bulk and processed fish products were key commodities sold to the rest of Canada. Electricity sales were an important component of Newfoundland trade with Quebec, accounting for 6.7% of total interprovincial exports in 1998.

¹² The following is a summary of information used to describe interprovincial trade from various sources that provided useful insights. The values mentioned here are in Canadian dollars. The descriptions of trade by value are based on Statistic Canada's report on *Interprovincial and International Trade in Canada, 1992-1998*, and therefore, 1998 is the most recent year for this analysis. The total values include both goods and services, unless otherwise specified. Statistics Canada uses the terms interprovincial exports and imports to refer to domestic trading activity between provinces.

¹³ *Interprovincial and International Trade in Canada, 1991-1998*. Statistics Canada. Catalogue No. 15-546-XPE, June 2000.

Prince Edward Island's Interprovincial Trade

In 1998 interprovincial exports of goods and services amounted to C\$821 million. Interprovincial imports totaled \$1.5 billion. During the 1992 to 1998 period, interprovincial exports increased 17.8% and interprovincial imports rose 38.6%. PEI had trade deficits with every province except Newfoundland, and the territories.

The largest markets for PEI's goods and services were New Brunswick, Ontario, Quebec, and Nova Scotia. These were also PEI's largest domestic import sources. In 1998, New Brunswick was the leading export market (\$227 million or 27.7% of total interprovincial exports). PEI imported \$289 million from New Brunswick, or 18.7% of domestic purchases in 1998. PEI exported \$133 million (16.2% of domestic sales) to Nova Scotia in 1998, and imported \$229 million (14.8% of domestic purchases).

Ontario was PEI's leading supplier (\$606 million or 39.2% of total imports). In terms of two-way trade (total imports and total exports), Ontario accounted for \$805 million or almost 34.0% of the total. This is in contrast to two-way trade with Quebec, which accounted for \$426 million or almost 18.0% of the total. Exports to Quebec amounted to 45.4% of imports from Quebec, which is indicative of the PEI deficit with that province. Exports from Ontario were 32.8% of total imports from Ontario.

Interprovincial imports and exports combined increased 30.6% from \$1.8 billion in 1992 to \$2.4 billion in 1998. Like in the case of Newfoundland, this performance was below the national average of 32.4% for the period.

There are no totals available for goods and services exports from PEI in the 1992 to 1998 period. However, key exports included transportation and storage services, food products, wholesaling, and accommodation and meal services. Wholesaling, business and computer services, transportation and storage services, and petroleum products dominated interprovincial imports.

Nova Scotia's Interprovincial Trade

Interprovincial goods and services exports totaled \$4.3 billion in 1998, an increase of 2.7% per annum since 1996. Exports of services expanded more rapidly than goods exports since 1996. In 1998, services accounted for more than 40.0% of all interprovincial exports. The top services exports were transportation, wholesaling, and communication services.

Interprovincial and international imports exceeded exports for the period of 1992 to 1998, giving Nova Scotia a trade deficit of \$5.7 billion in 1998. Over two-thirds of the deficit was with the rest of Canada.

Interprovincial exports were concentrated among Quebec, Ontario, New Brunswick, and Newfoundland. Together, Nova Scotia exported \$3.4 billion in goods and services to these four provinces in 1998. This represented 70.6% of total exports to other provinces.

On the import side, goods and services purchased from other provinces were valued at \$8.1 billion in 1998. Ontario, Quebec, New Brunswick, and Alberta accounted for \$7.4 billion or 91.0% of total interprovincial imports. The top imports were wholesaling, business services, transportation services, and transportation equipment. Services represented 44.5% of Nova Scotia's interprovincial imports in 1998, up from 39% in 1992.

Nova Scotia's deficit with other provinces in 1998 was \$3.9 billion (\$2.0 billion in goods and \$1.9 billion in services). Nova Scotia's deficit with Ontario amounted to \$3.3 billion in 1998. This represented a deficit more than 332% larger than Nova Scotia's exports to Ontario. The main source of the deficit with Ontario was imports of wholesaling, business services, and transportation equipment. The deficit with Quebec amounted to \$806 million in 1998, or 79.2% of exports. Significantly, the proportion of Nova Scotia's exports going to Quebec increased from 21% in 1992 to 24% in 1998.

New Brunswick's Interprovincial Trade

In 1998, total exports (interprovincial and international) of goods and services reached C\$10.9 billion. The principal orientation of the export trade is toward goods. In 1998, goods exports accounted for \$8.1 billion or 74.3% of total exports.

In 1998, New Brunswick exported 35.8% of its goods and services to Quebec (\$2.0 billion). Ontario received 27.8% (\$1.6 billion) of New Brunswick's domestic exports.

Leading interprovincial exports included petroleum and coal products, wood pulp and paper products, transportation services, and food products. Domestic exports of forestry products, including wood pulp, and paper products, were valued at \$1.3 billion in 1998. This represented over 46% of the total value of all exports. Petroleum products were valued at \$979.7 million, or about 17.5% of interprovincial exports. Transportation services grew from \$309.8 million in 1992 to \$496.0 million in 1998, an annual increase of 10.0%. Food products, including soft drinks and alcoholic beverages, and seafood products, amounted to almost \$810 million in 1998. This represented growth of 22.4% from the \$661.9 million exported to other provinces in 1992.

Imports from other parts of Canada in 1998 reached \$7 billion, an annual average increase of 3.4% since 1992. The leading import was wholesaling services at 13.6% of all interprovincial imports. Other major imports included business services, transportation services, and financial services. The interprovincial trade deficit in 1998 was \$1.3 billion. Although New Brunswick managed to maintain a surplus with Newfoundland, PEI, and Nova Scotia during the period, deficits of substance were incurred with Ontario and Quebec. The largest deficits were with Ontario, which ranged from \$1.7 billion in 1992 to \$1.4 billion in 1998. Leading imports from Ontario and Quebec were wholesaling services, and business services. In 1998, New Brunswick had a net trade deficit on services of more than \$1.6 billion. In addition, Ontario supplied financial services and food products that contributed to the deficit.

According to Coles, New Brunswick accounts for 51.3 percent of total inbound tonnages (i.e., freight from outside Atlantic Canada moving into Atlantic Canada); it accounts for 70.0 percent of outbound tonnages; it accounts for 53.2 percent of all intraprovincial freight within Atlantic Canada, and it accounts for 39.8 percent of the traffic between provinces within Atlantic Canada.

Quebec's Interprovincial Trade

Quebec's total domestic and foreign exports increased between 1992 and 1998 to reach \$107.1 billion. This was an increase of 69.3% or 11.5% per annum during the period. International exports grew by 18.7% annually during the period. In contrast, interprovincial exports increased by only 4.0% annually over the period.

Quebec's interprovincial exports in 1998 totaled C\$38.0 billion, while its interprovincial imports were C\$39.4 billion. Ontario was the leading market for Quebec's goods and services, accounting for exports worth \$22.0 billion or 58.0% of total interprovincial exports. Interprovincial sales of financial and business services both increased by 60.0% between 1992 and 1998.

Ontario was also the leading supplier for Quebec. In 1998, Quebec imported goods and services valued at 29.1 billion or 73.8% of total imports from other provinces. Quebec ran a deficit with Ontario amounting to \$7.0 billion in 1998. Quebec also had a deficit with Manitoba, which amounted to \$106 million in 1998. It ran a surplus with all other provincial trading partners.

NEZ-Canada's Interprovincial Freight Movements¹⁴

Freight flows provide additional perspective on interprovincial trade. In particular, the goods in transit are identified, allowing more detailed analysis of trade relationships among the NEZ provinces.

According to one comprehensive study of Atlantic Canada's freight movements, "Transport Canada has detailed information on rail freight movements. However, for Atlantic Canada, this is confidential at the provincial level."¹⁵ In 1997, iron ore was the largest commodity moved by rail in Atlantic Canada, representing 21.8 million tonnes or 58 percent of total rail freight with an origin in Atlantic Canada. Almost all of it was bound from Labrador to the Québec north shore (either Sept Iles or Port Cartier)¹⁶.

¹⁴ Statistics Canada is also the source of the railroad tonnage statistics mentioned in this section. The truck tonnage figures are taken from a 1995 traffic survey by the Canadian Council of Motor Carrier Administrators.

¹⁵ *Atlantic Provinces Surface Freight Transportation System Study: Final Report*, prepared for Transport Canada by Coles Associates Ltd., Consulting Engineers, in association with FGA Consultants Ltd. & Fred P. Nix, M.A. & Mohammed M. Alam. M.Sc., April 2000. See page 125.

¹⁶ *Ibid.*, page 125.

In 1997, the primary destination of goods shipped from Newfoundland by truck was Quebec. For-hire truckers moved 41.1 thousand tonnes of goods to Quebec in 1998, approximately 62.6% of all Newfoundland-origin extra-provincial domestic truck freight. This represents 33% of all Newfoundland's truck freight leaving Atlantic Canada.

		For-Hire Truck Volumes, 1997 (000 tonnes)						
Origin	Destination							
	Atlantic	Quebec	Ontario	Prairie	BC & Terr	Total Domestic	US	Total
Atlantic	12,277	953	786	17	8	14,041	2,328	16,369
Quebec	1,623							
Ontario	1,256							
Prairie	34							
BC & Terr	9							
Total	15,199							
US	554							
Total	15,753							

Source: Statistics Canada 53-222 in *Atlantic Provinces Surface Freight Transportation System Study: Final Report*, prepared for Transport Canada by Coles Associates Ltd., Consulting Engineers, in association with FGA Consultants Ltd. & Fred P. Nix, M.A. & Mohammed M. Alam. M.Sc., April 2000.

Data for 1997 for-hire truck volumes indicates a number of economic implications¹⁷:

- In 1997, Canadian-domiciled for-hire carriers earning \$1 million or more carried an estimated 19.9 million tonnes of freight into, out of and within Atlantic Canada. Sixty-two percent of this was within Atlantic Canada (i.e. freight had origins and destinations within the region), 24 percent was to, or from, the rest of Canada, and 15 percent was to, or from, the United States.
- Considering just the 12.3 million tonnes of intra-Atlantic freight, the five largest commodities by weight are crude wood materials (20 percent of the entire for-hire tonnages), petroleum products, other food products, waste and scrap, and paper and paperboard.²²
- In relation to freight moving between Atlantic Canada and the rest of Canada, the five largest commodities by weight are fabricated wood products, other food products, general freight, paper and paperboard, and vegetables and vegetable preparations.

¹⁷ Ibid., page 130

- Of the freight moving between Atlantic Canada and the rest of Canada, Québec accounts for 55 percent and Ontario accounts for 44 percent of the volumes. In other words, only tiny volumes of truck freight move to/from Western Canada.
- There are about 60 percent higher volumes, as measured by weight, of domestic freight moving into Atlantic Canada than out of the region.
- In terms of cross-border traffic, major outbound movements include paper and paperboard, fabricated wood products, other food products, rubber tires and tubes, and vegetables and vegetable preparations. Published Statistics Canada figures do not allow the inbound flows to be shown in this manner.
- Cross-border outbound tonnages exceed inbound by a factor of greater than 4:1.
- Most for-hire truck freight (carriers earning over \$1 million annually and shipments moving 80 km or more) is intraprovincial. Of the total 19.9 million tonnes of freight in Atlantic Canada, 46.8 percent is intraprovincial freight, 20.6 percent of the freight is from outside the region destined to Atlantic Canada, 17.6 percent is from within Atlantic Canada destined to outside the region, and 15.0 percent is between the four provinces.

For-Hire Trucking Volumes, Extra-Regional, 1997 (000 tonnes)								
	Nfld. & Lab		PEI		NS		NB	
	Outbound	Inbound	Outbound	Inbound	Outbound	Inbound	Outbound	Inbound
Que.	41.1	155.1	45.2	139.4	218.6	387.0	648.4	941.9
Ont.	21.2	131.9	102.0	32.0	186.2	518.9	476.6	573.6
West Can	3.4	6.0	0.2	0.7	14.5	22.4	6.8	14.3
Maine	1.0	0.0	15.7	10.6	34.7	52.6	878.9	66.0
US Northeast	47.7	10.9	129.3	4.6	176.6	72.2	612.2	101.9
US South Atlantic	1.5	6.6	39.7	1.2	97.2	71.2	130.3	36.6
US South Gulf	0.0	7.8	0.2	0.2	12.3	16.8	26.5	19.4
US Central	8.5	6.5	8.1	4.2	21.6	39.7	85.7	35.4
US West	0.1	0.6	0.2	0.9	2.3	2.4	3.5	1.1
Total	124.5	325.5	340.6	193.8	764.0	1,183.3	2,869.0	1,790.2

Source: *Atlantic Provinces Surface Freight Transportation System Study: Final Report*, prepared for Transport Canada by Coles Associates Ltd., Consulting Engineers, in association with FGA Consultants Ltd. & Fred P. Nix, M.A. & Mohammed M. Alam. M.Sc., April 2000.

According to the Coles study, food products (“food, feed, beverages & tobacco”) are relatively most important in Prince Edward Island where they make up 83 percent of the tonnes with an origin and 36 percent of the tonnes with a destination. Further, compared

to the other provinces, a significant portion of this movement of food products to/from Prince Edward Island is interprovincial.¹⁸

In the other three provinces, fabricated materials (things such as lumber or paper rolls) tend to be the most important (by weight) for for-hire truck commodities. In New Brunswick, however, crude materials out-weigh fabricated materials by a small margin. This, presumably, is because of the importance of logging trucks¹⁹.

For freight movements outbound from Atlantic Canada greater than 30,000 tonnes a year, certain classes of truck freight are noteworthy. For Newfoundland, food products (food, feed, beverages and tobacco) truck volumes amounted to 1,841,000 tonnes in 1997. Although 48.6% was moved in-province, Massachusetts received 19.9% of the total. Of Nova Scotia's 1,023,000 tonnes of end products South Carolina received 11.8%. New Brunswick shipped by truck to Maine 10.9% of its 34168000 tonnes of crude materials. Maine also received 15.2% of New Brunswick's fabricated materials, a part of the total volume of 32,279,000 tonnes. Other states receiving fabricated materials by truck from New Brunswick in significant amounts included Massachusetts (3.6%), New York (2.9%), Pennsylvania (1.9%), New Jersey (1.8%), and Connecticut (1.0%).

Exports by Truck, Atlantic Provinces, 1996

Exports from Atlantic Provinces by Truck, by Border Crossing, 1996					
Exports (C\$ millions) from					
Border Crossing	Nfld	PEI	NS	NB	Total
Woodstock	93.2	142.9	314.9	530.8	1,081.8
St. Stephen	39.2	63.8	612.9	492.2	1,208.1
Windsor, Ont	3.9	2.9	271.1	68.2	346.1
Sarnia, Ont	2.6	6.4	110.3	56.5	175.8
Fort Erie, Ont		2.9	33.7		36.8
Other	3.2	5.1	98.5	343.5	450.3
Total	142.1	224.0	1,441.4	1,491.2	3,298.7

Source: *Atlantic Provinces Surface Freight Transportation System Study: Final Report*, prepared for Transport Canada by Coles Associates Ltd., Consulting Engineers, in association with FGA Consultants Ltd. & Fred P. Nix, M.A. & Mohammed M. Alam, M.Sc., April 2000.

The Role of Trade Corridors

As indicated above, there is a strong relationship between regional trade and transportation in the NEZ. Within the NEZ, the most prevalent form of shipment is

¹⁸ Ibid., pages 153 – 156.

¹⁹ Ibid., pages 153 – 156. End products and general freight do not appear very important in any of these tables. That is because the measure is tonnes hauled. Their importance would increase considerably if freight revenues were the measure used.

surface transportation modes, especially road transportation. Because the transportation infrastructure offers both trade constraints and opportunities, it is important to recognise the role of trade corridors within the NEZ. NEZ-Canada contains five of the top twenty border crossings in Canada. Based on the available data, export flows passing through the following border crossings are reviewed here²⁰: St. Stephen, NB; Woodstock, NB; Lacolle, Quebec; Philipsburg, Quebec; and Rock Island Quebec.

About 85 per cent of Canadian trade by road with NAFTA partners is routed through only 11 border points. These include the two major Atlantic Canada border crossings - Woodstock, New Brunswick, connecting Highway 95 to Interstate Highway 95; and St. Stephen, New Brunswick, linking Highway 1 to State Highways Number 1 and 9 in Maine. Although there are about 17 Canada/U.S. border crossings in New Brunswick, St. Stephen and Woodstock are the most economically significant. Together, these two border crossings cleared more than 1% of total Canadian road exports in 1996. They accounted for a value of \$2.3 billion worth of Atlantic Canadian exports in 1996.



Source: Trade/Transportation Corridors: Working Report, prepared by Transport Canada for the Interdepartmental Working Group, November 1998.

St. Stephen, New Brunswick

²⁰See Trade/Transportation Corridors: Working Report, prepared by Transport Canada for the Interdepartmental Working Group November 1998. Available at http://www.corridors.gc.ca/en/corridors_publications.htm. Data on truck and rail export flows between Canadian provinces and US states by border crossing is reasonably detailed. For each export transaction from a Canadian source to a US destination, Statistics Canada records the originating point of the shipment in Canada, the mode used to carry it to the customs station, the crossing where it cleared customs, and its final state destination. This database permits detailed geographic analysis of trade flows between Canada and the United States. It also allows the linking of trade flows to principal highway and rail corridors. The Ontario crossings of Lansdowne, Fort Erie, Windsor, Sarnia, Sault Ste. Marie, and Fort Frances are ignored in this presentation, as are the prairie and pacific crossings.

This crossing into Maine is about 110 km west of Saint John NB. The St. Stephen crossing into Maine supports trade between the Atlantic Provinces and the Atlantic seaboard states, particularly New England. Its biggest users were Nova Scotia shippers who accounted for nearly half the exports, followed by New Brunswick shippers with an additional 40 per cent. PEI and Newfoundland accounted for almost all of the remaining balance. The largest U.S. customers were Massachusetts (37 per cent of the total), followed by Maine (22 per cent), South Carolina (nine per cent), and New York (six per cent). Negligible rail shipments were reported at the crossing in 1996.

Woodstock, New Brunswick

This is the other major border point for moving NEZ Canada goods to NEZ-US jurisdictions. Located farther up the Saint John River Valley, about 120 km west of Fredericton, it connects directly into US Interstate 95. As with St. Stephen, the Woodstock crossing handled predominantly truck traffic. In 1996, New Brunswick exported over C\$500 million in goods via Woodstock, nearly half the total processed by the crossing. Nova Scotia followed with slightly over \$300 million (27 per cent), and PEI was next largest at \$150 million or 12 per cent. As with the St. Stephen crossing, the main state destinations were in New England. Massachusetts received the most goods – C\$365 million or nearly one-third of the total. Maine was second at 12 per cent, followed by Pennsylvania (nine per cent) and New York (six per cent). More than 70 per cent of the exports through Woodstock went no farther than Pennsylvania and New Jersey.

Daily Truck Traffic, Major New Brunswick Border Crossings					
Border Crossings	Daily truck traffic			Percentage of Total	Cumulative Percentage
	1986	1996	AAGR⁺		
Woodstock	290	361	2.2%	26.9%	26.9%
Milltown*	207	240	1.5%	17.9%	44.7%
St. Stephen	100	164	5.1%	12.2%	56.9%
St. Leonard	24	116	17.3%	8.7%	65.6%
Andover	30	107	13.4%	7.9%	73.5%
Clair	43	85	7.0%	6.3%	79.8%
Other (11)	226	271	1.9%	20.2%	100.0%
Total	920	1,343	3.9%	100.0%	

Source: Trade/Transportation Corridors: Working Report, prepared by Transport Canada for the Interdepartmental Working Group, November 1998.

+ AAGR = Average Annual Growth Rate.

* Milltown is located near St. Stephen, and supports local traffic.

Most Prince Edward Island exports reach the United States through New Brunswick's two main border crossings. Over \$200 million worth of PEI's exports crossed at these two points in 1996. At that time, Woodstock accounted for \$142.9 million, representing 63.8% of PEI road exports. St Stephen accounted for \$63.8 million or 28.5% of PEI

exports by road. Sarnia, Fort Erie, and Windsor-Ambassador Bridge accounted for \$12.2 million of PEI exports in 1996, or about 5.5% of total road exports.

Like PEI, most of Nova Scotia's road exports also go through New Brunswick (64.3%) but some are cleared through Ontario's border crossings (28.8%). In 1996, about \$1 billion worth of New Brunswick's road exports was routed through Woodstock and St. Stephen. This is less than the \$1.3 billion in exports shipped through these points by the three other Atlantic Provinces. However, a significant amount of New Brunswick's road exports also reach the U.S. and Mexican markets through Ontario border points.

Newfoundland

Because it does not share a border with the US, all of Newfoundland's road exports are cleared outside the province. The two major Atlantic Canada border crossings (Woodstock, New Brunswick, connecting Highway 95 to Interstate Highway 95; and St. Stephen, New Brunswick, linking Highway 1 to State Highways Number 1 and 9 in Maine) cleared more than 90 per cent of Newfoundland's road exports. Most of the remaining road exports to the US and Mexico were cleared in Ontario²¹.

Newfoundland Road Exports to US/Mexico By Border Crossing, 1996 (\$ millions)			
Border Crossing	Export Value	Percentage of total	Cumulative percentage
Woodstock	93.2	65.6%	65.6%
St. Stephen	39.2	27.6%	93.2%
Windsor - Ambassador Bridge	3.9	2.8%	96.0%
Sarnia	2.6	1.8%	97.8%
Lansdowne	1.1	0.7%	98.5%
Other	2.1	1.5%	100.0%
Grand total	142.1	100.0%	

Source: Trade/Transportation Corridors: Working Report, prepared by Transport Canada for the Interdepartmental Working Group, November 1998.

Prince Edward Island

Most Prince Edward Island exports reach the United States through New Brunswick's two main border crossings. Some \$200 million worth of PEI's exports cross at these two points.

²¹ Trade/Transportation Corridors: Working Report, prepared by Transport Canada for the Interdepartmental Working Group November 1998. Available at http://www.tc.gc.ca/pol/en/report/Truck_Corridors/Contents.htm

Prince Edward Island Road Exports to US/Mexico By Border Crossing, 1996 (\$ millions)			
Border Crossing	Export Value	Percentage of Total	Cumulative Percentage
Woodstock	142.9	63.8%	63.8%
St. Stephen	63.8	28.5%	92.3%
Sarnia	6.4	2.9%	95.2%
Fort Erie	2.9	1.3%	96.5%
Windsor - Ambassador Bridge	2.9	1.3%	97.7%
Other	5.1	2.3%	100.0%
Grand total	224.0	100.0%	

Source: Trade/Transportation Corridors: Working Report, prepared by Transport Canada for the Interdepartmental Working Group, November 1998.

Nova Scotia

Most of Nova Scotia's road exports also go through New Brunswick but some are cleared through Ontario's border crossings.

Nova Scotia has a direct link to the United States by two ferry services at Yarmouth (one connecting to Bar Harbour and the other to Portland).

Nova Scotia Road Exports to US/Mexico By Border Crossing, 1996 (\$millions)			
Border Crossing	Export Value	Percentage of Total	Cumulative Percentage
St. Stephen	612.9	42.5%	42.5%
Woodstock	314.9	21.8%	64.4%
Windsor - Ambassador Bridge	271.1	18.8%	83.2%
Sarnia	110.3	7.7%	90.8%
Fort Erie	33.7	2.3%	93.2%
Other	98.5	6.8%	100.0%
Total	1,441.4	100.0%	

Source: Trade/Transportation Corridors: Working Report, prepared by Transport Canada for the Interdepartmental Working Group, November 1998.

They carry only minimal truck traffic. The daily truck traffic crossing into the US at Yarmouth declined from 13 trucks in 1986 to 3 by 1996.

New Brunswick

About \$1 billion worth of New Brunswick's road exports was routed through Woodstock and St. Stephen. This is less than the \$1.3 billion in exports shipped through these points by the three other Atlantic Provinces. However, a significant amount of New Brunswick's road exports also reach the US and Mexican markets through Ontario border points.

New Brunswick Road Exports to US/Mexico By Border Crossing, 1996 (\$millions)			
Border Crossing	Export Value	Percentage of Total	Cumulative Percentage
Woodstock	530.8	35.6%	35.6%
St. Stephen	492.2	33.0%	68.6%
Windsor - Ambassador Bridge	68.2	4.6%	73.2%
Sarnia	56.5	3.8%	77.0%
Lansdowne	55.6	3.7%	80.7%
Other	287.9	19.3%	100.0%
Total	1,491.2	100.0%	

Source: Trade/Transportation Corridors: Working Report, prepared by Transport Canada for the Interdepartmental Working Group, November 1998.

In 1996, more than 1,300 trucks used one of the 17 Canada/U.S. border crossings in New Brunswick every day. Only four had more than 100 vehicles a day, accounting for about three-quarters of all transborder truck

movements across New Brunswick's frontier.

Quebec

About half of Quebec's road exports to the US (and Mexico) use the Lacolle and Philipsburg crossings (Lacolle connects Highway 15 to Interstate Highway 87 and Philipsburg connects Highway 133 to Interstate Highway 89). Much of Quebec's remaining road exports were cleared outside the province, mostly in Ontario. Some 43 per cent or C\$11 billion worth of Quebec's road exports to NAFTA partners reached the US border via crossings in other provinces.

Quebec shares 28 border crossings with the states of Maine, Vermont, New Hampshire, and New York. In 1996, over 4,000 vehicles per day crossed the Quebec/US frontier. The four busiest border crossings (including Rock Island which connects Highway 55 to Interstate Highway 91 and Armstrong which connects Highway 173 to State Highway 201) account for some 80% of all transborder truck movements in the province. The growth of truck traffic at Quebec's border crossings over the last 10 years has been the lowest of all provinces.

Lacolle, Quebec

The largest crossing in Quebec, Lacolle is about 55 km south of Montreal. Most goods (nearly 85%) originated in Quebec. Ontario was responsible for most of the balance.

Quebec Road Exports to US/Mexico by Border Crossing, 1996 (\$ billions)			
Border crossing	Export Value	Percentage of Total	Cumulative Percentage
Lacolle	7,075.0	29.0%	29.0%
Philipsburg	4,696.6	19.2%	48.2%
Windsor - Ambassador Bridge	3,107.6	12.7%	60.9%
Sarnia	3,009.3	12.3%	73.3%
Lansdowne	2,596.9	10.6%	83.9%
Other	3,934.9	16.1%	100.0%
Total	24,420.3	100.0%	

About 7% of the exports through Lacolle were by rail. Exports were destined largely for New York State, whose Interstate 87 connects directly to the border at Lacolle. Almost C\$2.4 billion in exports or about 30% of the total in 1996 went to New York. New Jersey was the next largest customer, purchasing nearly C\$1 billion in goods (11%), followed by Massachusetts with an additional 10%, and Pennsylvania (9%). The distribution quickly

dropped off after these states with Florida in fifth place at only 4%. Trade through Lacolle appears to be supported largely by the Interstate 87 corridor. It permits access to the New York City and connects to the Eastern seaboard states along Interstate 95 and to the lower New England states via the Massachusetts Turnpike (I-90).

Daily Truck Traffic, Major Quebec Border Crossings					
Border Crossings	Daily Truck Traffic			Percentage of Total	Cumulative Percentage
	1986	1996	AAGR		
Lacolle	1,692	1,717	0.2%	42.8%	42.8%
Philipsburg	443	626	3.5%	15.6%	58.3%
Rock Island	280	540	6.8%	13.4%	71.8%
Armstrong	247	351	3.6%	8.7%	80.5%
Woburn	81	144	5.9%	3.6%	84.1%
St. Pamphile	104	101	-0.3%	2.5%	86.6%
Daaquam	52	100	6.8%	2.5%	89.1%
Other (21)	450	439	-0.3%	10.9%	100.0%
Total	3,349	4,018	1.8%	100.0%	

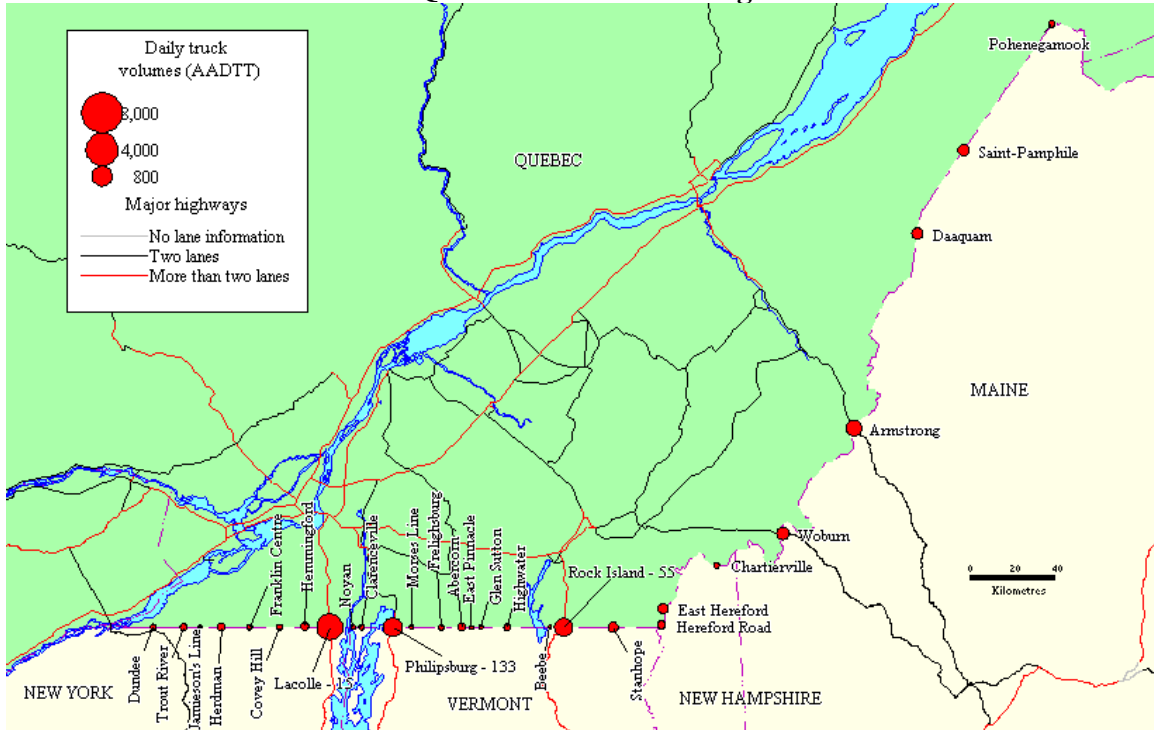
Source: Trade/Transportation Corridors: Working Report, prepared by Transport Canada for the Interdepartmental Working Group, November 1998.

Philipsburg, Quebec

The second largest border crossing in Quebec in terms of export volumes, Philipsburg is about 50 km south of Iberville, along Highway 133. As with Lacolle, it largely handled shipments originating in Quebec – over C\$5 billion in 1996 or 86% of the total. Ontario shipped only C\$500 million or nine per cent through this point. The neighbouring state of Vermont was the main recipient of these exports, purchasing over C\$3.5 billion in 1996 or 60% of the total. Next largest was Massachusetts, which imported C\$700 million in goods (11%) via Philipsburg, New York that imported another C\$500 million (9%), and

Connecticut with 6%. Goods shipped through Philipsburg are carried via Interstate 89, which connects directly to Highway 133, providing access to the New England States. About 90% of the shipments were bound for New England and New York and about 12% went by train.

Quebec Border Crossings



Source: Trade/Transportation Corridors: Working Report, prepared by Transport Canada for the Interdepartmental Working Group, November 1998.

Rock Island, Quebec

The third largest border crossing after Philipsburg is Rock Island. Located about 35 km south of the Eastern Township town of Magog along Highway 55, it is farthest east of the three major crossings. Almost 95% of its C\$1.5 billion in export traffic in 1996 originated in Quebec. Ontario accounted for the balance with about C\$60 million or 4%. The main importers of goods at Rock Island were largely in the New England states and New York.

Over 70% of the total shipments were destined for Vermont, New Hampshire, Connecticut, Maine, Massachusetts, Rhode Island, and New York. More than 99% of the export traffic was carried by truck. Highway 55 at Rock Island connects directly to Interstate 91, which provides access to the heart of the NEZ states.

NEZ's Trade in Global Perspective

In order to provide some broader perspective on the trading economy of NEZ, a brief review of the region's global export markets is presented in this section. This presentation provides some additional insight into the current condition and possible future evolution of trading relations among NEZ jurisdictions.

NEZ-US Global Export Markets

Almost 23.0% of total NEZ-US exports are destined for Canada. This is sufficient to make Canada the top export destination for each of the NEZ-US states. Among the participating states, there is wide variation in dependence on the Canadian market. Maine sends 46.7% of its total exports to Canada, and 75.7% of those exports are bound for the NEZ-Canada region. Vermont ships 49.1% of its total exports to Canada, and 54.7% of those are sent to NEZ-Canada. Although only 11.2% of Massachusetts' total exports are sent to Canada, the NEZ-Canada region takes 29.4% of the total exports to Canada.

NEZ-US Exports to NEZ-Canada and World, Annual 2001 (US \$)

State	Total World Exports	Total NEZ-Canada Exports	NEZ-Canada, Percentage of Total
New York	42,172,061,887	1,566,781,642	3.7%
Massachusetts	17,490,110,435	835,748,148	4.8%
Connecticut	8,610,434,400	502,923,251	5.8%
Vermont	2,830,359,684	759,854,765	26.8%
New Hampshire	2,401,032,490	218,971,207	9.1%
Maine	1,812,455,075	640,255,937	35.3%
Rhode Island	1,268,612,283	97,399,238	7.7%
NEZ-US	76,585,066,254	4,621,934,188	6.0%

Source: Total state exports from MISER AxesWeb, and NEZ-Canada exports calculated from Strategis Canada Trade Data Online.

NEZ-US had total global exports worth US\$76.6 billion in 2001. This accounted for almost 10.5% of total US exports of \$731.0 billion. The states comprising NEZ-US displayed significant variation in the extent to which they relied upon NEZ-Canada as a market.

Between 1999 and 2001, the states in NEZ-US increased the value of their total world exports by 9.1% from \$70.2 billion to \$76.5 billion.

Throughout the period,

Canada was the top export market for the NEZ-US region.

**NEZ-US Exports to Canada and NEZ-Canada, Annual 2001
(US \$)**

State	Total Exports to Canada	Canada as % of World Exports	Total Exports to NEZ-Canada	NEZ-Canada as % of Exports to Canada
New York	9,760,100,000	23.1%	1,566,781,642	16.1%
Massachusetts	2,844,500,000	11.2%	835,748,148	29.4%
Connecticut	1,728,800,000	20.1%	502,923,251	29.1%
Vermont	1,389,900,000	49.1%	759,854,765	54.7%
New Hampshire	593,900,000	24.7%	218,971,207	36.9%
Maine	846,300,000	46.7%	640,255,937	75.7%
Rhode Island	352,100,000	27.8%	97,399,238	27.7%
<i>NEZ-US</i>	<i>17,515,600,000</i>	<i>22.9%</i>	<i>4,621,934,188</i>	<i>26.4%</i>

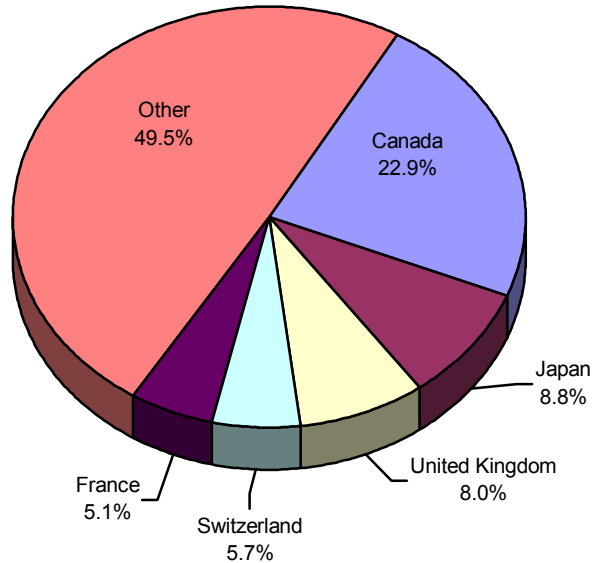
Source: Total state exports from MISER AxesWeb, state exports by country from US Census Bureau, Foreign Trade Division, and NEZ-Canada shares calculated from Strategis Canada Trade Data Online.

In 1999, the Canadian market accounted for 49.4% of NEZ-US regional exports to the top five markets and 28.1% of regional exports to all markets. In 2001, Canada accounted for 41.9% of exports to the top five markets and 22.9% of exports to all markets. Sales to the Canadian market dipped by 11.1% between 1999 and 2001. However, general economic conditions alone do not explain this development.

Global export markets for NEZ-US are displayed for 2001 by percentage of total

value. NEZ-US exports to Canada fell over the period from 1999 to 2001 from \$19.7 billion to \$17.5 billion for a decline of 11.1%. Whereas Canada accounted for 28.1% of total NEZ-US exports in 1999, the share had fallen to 22.9% in 2001. Japan was the second largest export destination for NEZ-US. The total value of sales to Japan reached \$6.7 billion in 2001. Over the 1999 to 2001 period, exports to Japan were up 28.5%. In 1999, Japan accounted for 7.5% of total exports from NEZ-US. By 2001, the share had grown to 8.8% of total exports.

**NEZ-US Global Export Markets, 2001
(percentage of value)**



Source: Calculated from US Census Bureau, Foreign Trade Division, State Exports by Country, 2001

Similarly, exports to the United Kingdom were valued at \$6.1 billion in 2001. Over the period to 2001, exports to the UK rose 10.2%. In 1999, the UK accounted for 7.9% of total NEZ-US exports.

Sales to Switzerland were dominated by New York, which accounted for 92.8% of total exports to Switzerland. Over the 1999 to 2001 period, exports grew by 17.1% to reach \$4.4 billion in 2001.

New York was also the major exporter to France accounting for \$1.5 billion of \$3.9

billion in sales in 2001 (37.7% of the total). New York’s exports over the period grew by 38.6%, which was largely responsible for the NEZ-US region’s total export growth of 32.5% to France.

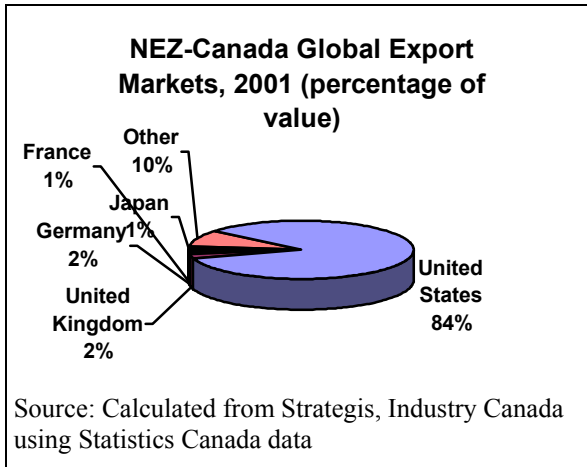
Thus, on value and market share criteria, NEZ-US exports have become less oriented to Canada as a national marketplace since the late 1990s. This is clearly the case when every NEZ-US state except for Maine recorded a decline in sales to Canada between 1999 and 2001. For example, New York saw its total exports increase to the top five markets by 7.0% between 1999 and 2001. However, sales to Canada dropped in the same period by 7.8%. Massachusetts had growth in exports to the top five markets of 4.8% in the period, but sales to Canada fell by 9.9%.

NEZ – Canada Global Export Markets

Between 1997 and 2001, the value of NEZ-Canada exports to all markets rose from \$46.9 billion to \$57.5 billion, an increase of 22.4%. The value of exports to the top five markets rose from \$40.9 billion in 1997 to \$52.1 billion in 2001, an increase of 27.1%. In 2001, the top five export markets accounted for roughly 90.6% of the value of NEZ-Canada regional exports to all countries. The market share based on value for the top five markets in 2001 indicates the vital importance of the US market.

The share of NEZ-Canada exports going to the US market increased from 79.9% in 1997 to 84.2% in 2001. This yielded the highest growth rate – 29% -- among the top five markets over the period.

The share of exports bound for the United Kingdom remained essentially unchanged at 2.2 over the period. This was achieved by a growth in the value of exports over the period amounting to 24.5%. This was the second highest growth rate among the top five export markets for NEZ-Canada products.



The third largest market was Germany, which maintained a share of exports amounting to 1.6% over the 1997 to 2001 period. Export sales to Germany grew by 22.1%. France's share of exports fell from 1.6% in 1997 to 1.4% in 2001. The growth in sales to France however went up by 6.9% over the period. Japan's share of total export value fell over the period from 1.9% to 1.1%. Exports to Japan fell by 26.7% over the period.

On the whole, then, it appears that the orientation of NEZ-Canada to US markets not only increased between 1997 and 2001, but it did so at the expense of sales into other major markets.

Newfoundland's International Trade

As a portion of total exports, international sales rose from C\$1.8 billion in 1992 to C\$3.7 billion in 1998. In 1998, international exports represented 75.5% of total exports, up from 64% in 1992.

Despite the fact that services exports grew by 37.3% between 1992 and 1998, their share of total exports fell from 30.6% to 20.2% in the same period.

The combined value of international imports and exports increased 40% between 1992 and 1998. Unlike its chronic deficit on interprovincial trade, Newfoundland enjoyed a significant surplus on international trade. Although the surplus increased from C\$422.9 million in 1992 to C\$793 million in 1998, as a proportion of total international trade (exports and imports) the ratio slipped from 13.6% to 12.1%.

Breakdown of Goods and Services Newfoundland's International Trade, 1992 and 1998 (C\$ millions)				
	Exports		Imports	
	1992	1998	1992	1998
Goods	1227.5	2926.1	NA	NA
Services	540.3	741.9	NA	NA
Total	1767.8	3668.0	1344.9	2875.0

Source: *Interprovincial and International Trade in Canada, 1991-1998*. Statistics Canada, Catalogue Number 15-546-XPE, June 2000

Newfoundland's principal exports are mining (iron ore), fish products, refined petroleum, and pulp and paper. In 1998, these four categories represented 59% of total international exports, and were valued at C\$2.2 billion.

The province's major international imports are crude oil (for refining purposes), transportation equipment, machinery, and communications equipment. These were valued at C\$1.4 billion in 1998, when they represented 47.4% of total international imports.

Prince Edward Island's International Trade

As a proportion of total exports, international sales rose from C\$328.2 million in 1992 to \$718.4 million in 1998. By 1998, international exports accounted for 47.9% of total exports worth \$1.5 billion. This was an increase from 32.8% of total exports in 1992.

In the period 1992 to 1998, service exports increased by 92.6% to \$174.7 million. Goods exports grew even more rapidly, increasing 128.8% to \$543.7 million.

International exports were dominated by agriculture and food products, transportation services, and accommodation and food services associated with tourism. In 1998, these exports accounted for 72.0% of international exports. On the import side, motor vehicles, transportation equipment, machinery and equipment, electronic products, and pharmaceutical products were the leading goods inbound to PEI.

Breakdown of Goods and Services PEI's International Trade, 1992 and 1998 (C\$ millions)				
	Exports		Imports	
	1992	1998	1992	1998
Goods	237.6	543.7	251.5	401.0
Services	90.7	174.7	35.8	47.5
Total	328.2	718.4	287.3	448.4

Source: *Interprovincial and International Trade in Canada, 1991-1998*. Statistics Canada, Catalogue Number 15-546-XPE, June 2000

Nova Scotia's International Trade

International exports of goods and services in 1998 reached \$5.4 billion, and accounted for more than half of Nova Scotia's total exports. Paper products, including newsprint and pulp were the top export in 1998. These represented 15.2% of international exports in 1998, up from 13.1% in 1992. Fish products were the second ranked export from Nova Scotia in 1998. Other key exports included leather and plastic products, transportation services, and vehicle tires.

International imports totaled \$7.2 billion in 1998. Transportation equipment for the car assembly plant and the aircraft engine plant was the leading import, accounting for almost 19% of the total. Other major foreign imports included machinery and equipment (12% of imports), offshore crude oil (10.5%), and electronic products.

Breakdown of Goods and Services Nova Scotia's International Trade, 1992 and 1998 (C\$ millions)				
	Exports		Imports	
	1992	1998	1992	1998
Goods	2342.7	4184.4	3399.8	6426.9
Services	695.2	1227.7	370.3	785.2
Total	3037.9	5412.1	3770.1	7212.1

Source: *Interprovincial and International Trade in Canada, 1991-1998*. Statistics Canada, Catalogue Number 15-546-XPE, June 2000

New Brunswick's International Trade

Over the 1992 to 1998 period, total foreign exports grew by 49.4% or 8.2% annually. Goods exports increased by 50.7%, and services registered an increase of almost 45.0%. Total imports from foreign sources increased by almost 59.0% over the period. Goods imports represented 90.0% of all international imports. Goods imports rose by 61.1%, creating a deficit on trade in goods. Trade in services grew by 36.9%, but New Brunswick's international export of services was positive by \$695 million in 1998.

Breakdown of Goods and Services New Brunswick's International Trade, 1992 and 1998 (C\$ millions)				
	Exports		Imports	
	1992	1998	1992	1998
Goods	2797.4	4215.5	3435.8	5534.5
Services	787.5	1141.6	326.2	446.6
Total	3584.9	5357.1	3762.1	5981.1

Source: *Interprovincial and International Trade in Canada, 1991-1998*. Statistics Canada, Catalogue Number 15-546-XPE, June 2000

The leading international exports were wood pulp, paper and paper products (17.3%), lumber and other wood products (12.9%), petroleum and coal products (11.8%), and meat, fish and dairy products (10.9%). The single largest import was mineral fuels at \$1.7 billion or 28.8% of total foreign imports. This product, mostly crude oil, is dependent

upon international oil prices. The value of mineral fuel imports in 1998, for example, was 20.0% less than in 1997 when prices were firmer. Imports of machinery and transportation equipment in 1998 amounted to \$1.2 billion or 20.7% of total international imports.

Quebec's International Trade

Between 1992 and 1998, international exports rose from C\$32.6 billion to \$69.0 billion. An increase of more than 112%, Quebec's performance gave it an annual growth rate for foreign exports of 18.7%.

Breakdown of Goods and Services Quebec's International Trade, 1992 and 1998 (C\$ millions)				
	Exports		Imports	
	1992	1998	1992	1998
Goods	25958.2	57202.2	33918.6	59447.1
Services	6599.3	11840.5	5424.8	8376.6
Total	32557.4	69042.8	39343.4	67823.8

Source: *Interprovincial and International Trade in Canada, 1991-1998*. Statistics Canada, Catalogue Number 15-546-XPE, June 2000

Exports of transportation equipment rose from \$3.3 billion in 1992 to 10.0 billion in 1998, an increase of 203.0% or 49.3% annually. Commuter aircraft, motor vehicles, railway cars, personal watercraft and snowmobiles were major components of sales. International exports of aircraft and aircraft engines and parts were valued over \$5 billion in 1998. Primary metal products rose 93.8% to \$7.6 billion by 1998. Electronics and communications equipment exports were worth \$7.2 billion in 1998, an increase of 123.9% since 1992. Lumber and wood products exports also rose sharply from \$3.6 billion in 1992 to \$6.6 billion in 1998. All major service producing industries increased between 1992 and 1998, including wholesale trade, transportation, finance, and business services.

International imports grew at an annual rate of 12.1% between 1992 and 1998. This reflected annual growth of 12.5% for goods imports, and 9.1% for services imports. The leading import was motor vehicles, transportation equipment and parts, which reached \$11.4 billion in 1998 (an increase of almost 100% over the period. Electronics, communications and electrical equipment were the second largest import, valued at \$9.2 billion in 1998. Part of the increase is attributed to the rebuilding which occurred after the severe ice storm in Quebec during January 1998. Machinery and equipment was the third largest import, reflecting plant investments by business in the province. Over the period 1992 to 1998, machinery and equipment imports rose from \$3.8 billion to \$7.7 billion, or 99.5%.

Conclusions

- The Northeast Economic Zone presents itself as a technologically sophisticated, substantially diversified economy that produces resource-based goods bundled with knowledge and expertise.
- The NEZ supplies manufacturing, electronics, food processing, information technology/telecommunications, forestry, and finance and insurance to buyers around the world.
- The NEZ's trading system is structured on a powerful Quebec – New York axis. More than half of all trade in NEZ is associated with bilateral commercial ties between these two jurisdictions.
- The Quebec – New York trade relationship centres on high technology and advanced manufacturing. This relationship may be the source of strategic development opportunities that could open a vital innovation corridor to other jurisdictions in the NEZ. In addition, there are important collaborative potentials associated with the networks of NEZ jurisdictions beyond the region. Both the American and Canadian jurisdictions have an opportunity to work closely on building third market ventures and network sharing that will help expand jobs and opportunities across the region.
- This opportunity probably will not be realised unless the NEZ's pressing transportation needs are addressed. Existing road and port transportation infrastructure have reached the point of severe congestion. Even existing air transportation infrastructure does not provide adequate linkages throughout the NEZ. This means the NEZ as a region is not meeting its enormous economic potential.
- A major opportunity exists for the region to upgrade, expand, and develop infrastructure to support the region's future economic expansion, and retain a reputation as competitive, accessible, and reliable trading partners. This is as important for trading beyond the region, as it is for further expanding intra-regional trade.
- In the contemporary North American security environment, not only must existing transportation infrastructure be upgraded, expanded and developed, it must also meet the challenge of being secure from hostile disruption. With security issues shaping the public policy agenda in fundamental ways, the transportation challenge for NEZ might be a basis upon which interested technology partnerships throughout the region can cooperate to build essential, competitive, and secure modern infrastructure.
- Because the region is composed of geographically dispersed communities, development strategies need to acknowledge the role of small centres, and attempt

to tie them into larger urban economic initiatives. In this regard, transportation linkages are of vital importance.

- To compete in the global economy, the NEZ must continue to build collaborative private partnerships among participating jurisdictions, and stakeholder groups such as states and provinces, corporations, universities, civil society, as well as urban and rural communities.