AN ANALYSIS OF THE EFFECT OF THE FREE TRADE AGREEMENT ON PROFITABILITY IN THE BRITISH COLUMBIA WINE INDUSTRY

by

KIMBERLY J. ROSS

B.Sc. (Agricultural Economics), The University of Saskatchewan, 1987

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF

THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF SCIENCE

in

THE FACULTY OF GRADUATE STUDIES

(Department of Agricultural Economics)

We accept this thesis as conforming

to the required standard

THE UNIVERSITY OF BRITISH COLUMBIA

April 1995

In presenting this thesis in partial fulfilment of the requirements for an advanced degree at the University of British Columbia, I agree that the Library shall make it freely available for reference and study. I further agree that permission for extensive copying of this thesis for scholarly purposes may be granted by the head of my department or by his or her representatives. It is understood that copying or publication of this thesis for financial gain shall not be allowed without my written permission.

Department of AGRICULTURAL ECONOMICS

The University of British Columbia
Vancouver, Canada

Date APRIL 23, 1995

DE-6 (2/88)

ABSTRACT

The 1988 Canada - United States Free Trade Agreement and GATT decision radically altered the trading regime between the two countries. Historically well-insulated from a competitive environment, there was concern that the British Columbia wine industry would not be able to compete under the new trading rules outlined within the Free Trade Agreement and resulting from the GATT decision that once imported, all products were to be afforded national treatment. This study was undertaken to determine whether or not the industry is better off under the Free Trade Agreement with respect to profits and the ability to compete head on with imports.

A benchmark situation covering producer organization/market structure, prices, production and profitability portrays an industry prior to the Free Trade Agreement that is profitable, however, the profitability appears to be based on the fact that the B.C. government was protecting the industry against foreign wine producers. Section 4.0 of the study outlines the trade related factors; policy and procedural changes. Details of industry policy, the FTA, GATT ruling, and interprovincial barriers are discussed with a graphical analysis of the impact of B.C.'s domestic policies on the international market. Section 5.0 studies the industry changes as a result of Section 4.0. Changes in pricing, production (domestic and imported), industry sales and revenue, profitability and marketing strategies lead to the conclusions presented in Section 6.0.

... page ii

The conclusions of the analysis support the hypothesis that the B.C. wine industry is at least as profitable as it was prior to the policy changes and its growth suggests that the most profitable segments of the industry are the premium estate and farm winery segments.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ACKNOWLEDGEMENTS

I would like to thank the members of my thesis committee, Dr. Rick Barichello, Dr. James Vercammen, Dr. Jim Forbes and Dr. George Kennedy. I am especially grateful to Rick for agreeing to be my principal advisor subsequent to the departure of Dr. Tim Hazledine, whose contributions I would also like to recognize.

Appreciation is also due to Kathy Shynkaryk and Retha Gertsmar for being my UBC/Abbotsford liaisons; notifying me of Tim or Rick's next whirlwind trip through UBC so updates could be prepared!

Above all, I would like to thank my family who have patiently supported me in my seven year journey to achieving my Master of Science degree. Their enduring encouragement and enthusiasm has been most appreciated. To my sweet son, Carson, I apologize for the hours my studies took away from playtime with you, however I hope you will see someday how important it is to persevere and be the best you can be.

SECTION 1.0 INTRODUCTION AND PROBLEM STATEMENT

1.1 Introduction

The B.C. wine industry historically has been well-insulated from a competitive environment. The 1988 Free Trade Agreement (FTA) between Canada and the United States radically altered and eventually eliminated the various barriers to trade in place under the government's liquor distribution board. The B.C. wine industry underwent a major overhaul: grape acreages were pulled out; government-approved vinifera grapes were planted; a new focus on producing quality grapes was introduced along with the implementation of a marketing program that would educate, inform and promote the new premium B.C. wines to consumers. The FTA was heavily lobbied against for fear those affected would be worse off. From outward appearances, the B.C. wine industry has seemed to benefit from the Free Trade Agreement and related policy changes, such as the GATT decision of 1988.

1.2 Problem Statement

An analysis is carried out herein to try to determine if the industry is benefiting, if only certain segments of the industry are better off, and if the "new" industry is one that can be sustained in the future. The primary focus is to review the B.C. wine industry and its competitiveness following the major changes in the trade regime affecting grapes and wine since 1989 and resulting from both the Free Trade Agreement with the U.S. and the GATT decision of 1988. In particular, the question being addressed is whether the industry is more profitable and thereby more able to compete than it was prior to the Free Trade Agreement.

The issue of competitiveness is a difficult one to address. Michael Porter reports[1] that the "underpinning of competitiveness" is productivity. Productivity, he purports, is the value of output produced by a day's work or a dollar of capital invested. Competitiveness has emerged as a preeminent issue for firms and government policy-makers in every industrialized country. Most efforts to explain national competitiveness have taken an aggregate perspective, focusing on factor endowments, macroeconomic indicators or government policies. Patterns of international trade have traditionally been explained within the framework of comparative advantage. "The best-known variant of this theory begins with the premise that all countries employ equivalent technologies but differ in their endowments of so-called factors of production - land, labour, natural resources, and capital..".[2] The traditional theory holds that particular countries gain advantage in those industries in which they make the most intensive use of the production factors they have in abundance.

Recently, however, there has been a growing realization that traditional comparative advantage theory is no longer sufficient to understand the patterns of trade in current international competition. The global nature of competition has had the effect of reducing the significance of a home country to the success of a particular firm or industry. However, Porter's ten-nation study (1990) produced results that suggested strongly that leading international competitors in a given

---

[1]Porter, Michael. "Canada at the Crossroads - The Reality of a New Competitive Environment", Ottawa, 1991. pg. 5.

[2]Porter, Michael. "Canada at the Crossroads...", Ottawa, 1991. pg. 22

industry are often located in the same country and often in the same city or region. From this result, Porter created a new paradigm that presented a consistent and holistic explanatory framework. This framework became known as the "Diamond of Competitive Advantage"[3]. It can be thought of as a playing field that each country or industry or firm establishes for itself. Initially my study attempted to follow the "Diamond" and review the B.C. Wine Industry solely on the Diamond's perspective. However, while the "Diamond" is addressed in Section 3, the process of my study evolved to more closely mirror the mechanisms involved in the Lusztig Commission Report on the British Columbia Tree Fruit Industry (1990).[4]

Special attention in my thesis is given to the adjustments (to the changing trade policies) made in the wine sector, in both the major (commercial) wineries and the estate/farm wineries.

1.3 Research Procedure

The research is organized as follows. First we establish a benchmark situation in 1988, prior to the FTA, from which we can observe any induced changes, in terms of industry structure, prices, production, imports, and profitability. Second, the industry policy and procedural changes brought about by the FTA and GATT

---

[3]See Appendix C for diagram.

[4]Lusztig, Peter A., "Report of the Commission of Inquiry - British Columbia Tree Fruit Industry", May 31, 1990. The Lusztig Commission was asked to inquire into and report on the present financial condition and future viability of the British Columbia Tree Free Industry.

decision is catalogued, including mark-ups, import tariffs, grape pricing, pricing constraints, marketing and distribution regulations. Analysis of the wine industry economics, for major and estate/farm wineries follows. This involves changes in production, revenues, net selling price and profitability. The analysis also looks at changes in marketing strategies and production procedures. Constraints affecting the industry's response are identified. The policy changes are expected to effect different responses from the major winery segment than the estate/farm winery segment and these differences are discussed as well.

SECTION 2.0 EVOLUTION OF THE B.C. WINE INDUSTRY

2.1 Historical Beginnings

Grapes have been grown in B.C. since the early explorers settled in various areas of the province[5]. In the 1860's, Father Charles Pandosy planted vines at the Oblate Mission seven miles south of Kelowna, near the shores of Lake Okanagan.[6] In 1918, the Fraser Valley begat its first winery when Leon de Montreux Chevalley, a pioneer of the dairy products industry of the Northwest, began to cultivate loganberries in the Chilliwack Valley. Relying on the vintner experience he'd gained in Italy, Chevalley created a tremendous demand for his wine.[7]

---

[5]See Adams (1992) for more detail on the development of the British Columbia wine industry.

[6]British Columbia Wine Institute, publication date unkown.

[7]Maurice Chevalley, personal reference.

2.1.1 Varietal Plantings

The first serious plantings were made in the Okanagan area in 1926. Planted were North American varieties such as Patricia, Sheridan, Campbells Early, Delaware, Concord, Pearl of Csaba, Ontario, Niagara, and others suited to fresh markets for eating, jam and juice. Through the efforts of pioneers such as Mr. J.W. Hughes, the Casorso Brothers, the Rittich Brothers and others, grape acreage gradually increased. Extensive experimentation at the Dominion Experimental Farm (now the Agriculture Canada Research Station at Summerland) fostered the development of vineyards in British Columbia.

Experimentation with French Hybrids began in the 1950s. By 1959, varieties such as Bath, Okanagan Riesling, and French hybrids such as Bertyle Seyve 2862, Aurora, Rougeon, Marechal Foch, Chancellor, Verdelett, De Chaunac, Rosette, Chelois, and Cascade were introduced and planted for wineries. These French hybrids were suitable for colder areas, resistant to disease and became the backbone of the wine industry until renewed attempts to grow other European varieties proved successful in the late 70s. From 1974 to 1979, there was a renewed interest in grape varieties imported from California and Washington state. Cabernet Sauvignon, Chenin Blanc, Merlot, Gewurztraminer, Grey Riesling, White Riesling, Semillon, and Chardonnay were evaluated at 18 sites throughout the Okanagan.

In 1979, Auxerrois, Pinot Gris and Gewurztraminer were imported from France and planted by Mr. George Heiss. Mr. Heiss later planted Kerner (brought in

... page 5

from Germany) and in 1982, established Gray Monk Estate Winery.

The 1980s was a period of extensive varietal experimentation followed by a period of sorting and evaluation. There existed a change of varieties to the european selections and a reduction of the older table grape selections as well as a reduction in the French Hybrids.

2.1.2 Technological Changes in Production

Technological changes in wine and grape production have created an industry in 1991 that has little resemblance to its early beginnings. Additionally, as a result of the FTA and GATT decision (1988 GATT ruling that the Liquor Distribution Branch's price markups were unconstitutional), the British Columbia wine industry was forced to restructure and focus solely on quality. As part of a $28 million aid package to help the grape-wine industry adjust to life under the Canada-U.S. Free Trade Agreement, the B.C. and Federal governments paid growers $8,100/acre to pull out "undesirable" grape vines with a view to replacing them with more "desirable" varieties that could potentially produce a wine able to compete in a free trade environment. Growers removed grapes used for blended wines and replanted with European or vinifera varieties, used for higher-priced premium wines. Seventy percent (70%) of B.C.'s vineyards (2,400 acres) were pulled. Most of the 1,000 remaining acres had been planted two to three years earlier in anticipation of the GATT ruling and FTA. The introduction of new varieties has created an industry base that is barely 10 years old. This, by European standards is extremely infantile. Before free trade, the industry

consisted of over 200 vineyards growing 3,400 acres of grapes. Today, only the highest-quality grape varieties are grown on 119 selected vineyard sites.

Table 2.1.2 Acres of Wine Grapes Planted in British Columbia

YEAR	ACREAGE
1952	425
1964	1,187
1970	2,414
1974	3,066
1979	3,236
1982	3,022
1983	3,300
1985	2,967
1986	3,150
1987	3,310
1988	3,456
1989	1,047
1990	1,293
1991	1,448
1992	1,545
1993	1,685
1994	1,765
1995*	1,891
1996*	2,083

Source: British Columbia Wine Institute; Ministry of Agriculture, Fisheries and Food.

*** Note: Indicates projected acreage based on new plantings.**

Table 2.1.3 Total Number of Vinifera Acres Planted in British Columbia

	ACREAGE		
	1983	**1990**	**1992**
Riesling	107	158	166
Chardonnay	16	106	128
Pinot Blanc	1	92	115
Ehrenfelser	40	81	87
Pinot Noir	7	58	81
Gewurztraminer	26	75	75
Auxerrois	3	30	54
Merlot	14	48	87
Chasselas	16	25	31
Top Ten Vinifera Planted	**232**	**695**	**857**
Versus Total Acreage	**3,300**	**1,293**	**1,545**
Vinifera as a Percentage of Total:	**7%**	**54%**	**56%**

Source: British Columbia Wine Institute; Ministry of Agriculture, Fisheries and Food.

Table 2.1.4 Other Specialty Plantings of Vinifera

	ACREAGE		
	1983	**1990**	**1992**
Muller-Thurgau	1	27	30
Scheurebe	14	14	21
Optima	8	18	17
Pinot Gris	1	13	16
Chenin Blanc	18	15	15
TOTAL SPECIALTY PLANTINGS:	**42**	**87**	**99**
VERSUS TOTAL ACREAGE:	**3,300**	**1,293**	**1,545**
SPECIALTY PLANTINGS AS A % OF TOTAL:	**1.3%**	**6.7%**	**6.4%**

Source: British Columbia Wine Institute

Table 2.1.5 Premium Hybrids Planted in British Columbia (1991)

(Selected and limited plantings of premium hybrids have been retained)	
Verdelet	122 acres
Seyval Blanc	37 acres
Chancellor	24 acres
Pearl of Zala	16 acres
Vidal	57 acres
Marechal Foch	35 acres
Baco Noir	21 acres
Total:	**312 acres**
As a % of Total Acreage:	**21.5%**

Source: British Columbia Wine Institute; Ministry of Agriculture, Fisheries and Food.

It is evident from the above tables that vinifera plantings were encouraged by the government as those being most able to produce a wine that could compete in a free trade environment. Independently, progressive growers had also realized that vinifera stock was required in order to produce a better quality wine. However, prior to the government recognizing this fact, importing the required stock was difficult and quarantine requirements were unusally strict.

However, the hybrids have shown in the past two or three years to be competitive as well. The new focus on quality production rather than quantity could well be playing a part in, not only the hybrids' success but on the entire B.C. wine-producing success thus far. Prior to the industry's attempts to develop a grape and wine industry that could succeed in a free trade environment, the production focus of the contracts between wineries and grape growers was quantity. By way

... page 9

of the 80/20 rule, the commercial wineries were required by law to purchase all of the BC-grown grapes before importing any grapes or juice. Wine content produced in B.C. had to consist of 80 percent B.C. grown grapes and 20 percent imported product. The B.C. grape growers had a guaranteed market and therefore did not need to innovate or produce top-quality grapes. In efforts to produce quantity, quality is most always compromised where grape production is concerned. The government-legislated 80/20 rule created great tension between growers and wineries. The wineries felt they were losing competitive advantage because they were forced to purchase grapes that did not make a good wine: characterized by being the wrong species and of poor quality. The majority of grape growers would not cooperate with the wineries because they had no incentive to do so. As far as they were concerned, their product, as it was, had guaranteed purchasers. The government had insulated the growers from the competitive market and were forcing wineries to be uncompetitive.

As a result of the FTA, the 80/20 rule will be completely phased out by the end of 1994. The phase out has created an impetus to grape growers to produce desirable, top-quality grapes. However, these grapes still do not have a guaranteed market, and are under considerable competitive pressure from California product which can be purchased by B.C. major wineries at one-third the cost of most B.C. product.[8] This pressure is believed to have created the main

[8]Premium, vinifera grapes in British Columbia are priced in the same market as those from premium markets in California. In some cases, vinifera grapes in California cost more than those in British Columbia. The savings come when B.C. wineries purchase low-end grapes in order to produce a blended, high-volume, low-end market product. Such low-end grapes purchased are Thompson Seedless, which do not have a distinct varietal flavour and thus can be processed as various types of wines. Competition

... page 10

drive for establishing farm wineries in British Columbia. Many grape growers have entered the wine-making industry in order to secure a better future for their premium grapes. New wineries have entered the industry in 1961, 1979, 1981, 1982, 1986, and annually since 1988.[9]

In 1989, under pressure from the new, global economy, the British Columbia Wine Institute was established under Bill 58-1990, "The British Columbia Wine Act". The Institute established the goal of developing a solid premium wine industry in B.C. in a very short period of time. It also was deemed the optimal way to make use of the adjustment program funds allocated towards the future marketing and promotion of B.C. wines.

SECTION 3.0 LITERATURE REVIEW

In this section, a review of related studies on the B.C. wine industry is presented. In addition, I will show how Michael Porter's[10] work applies to the B.C. wine industry and how its analysis would compare to this thesis. Please see Appendix C for a schematic reference to Porter's "Diamond of Competitive Advantage".

---

becomes less of a factor when comparing Thompson Seedless with B.C. vinifera grapes, because the outputs are completely different products.

[9]Vielvoye, John. Province of British Columbia, Ministry of Agriculture, Fisheries and Food, Profile of the Grape & Wine Industry of British Columbia, p. i, Victoria, 1991.

[10]Professor Michael E. Porter of the Harvard Business School has produced several works on competiveness. In his text, "The Competitive Advantage of Nations", copyright 1990, Porter develops a "Diamond of Competitive Advantage" - a framework on which analysis of an industry or nation can be based. It is upon this framework that this comparative analysis is based.

3.1 Related Studies

Prior to the trade liberalization realized through the FTA and the GATT negotiations, Derek Adams (1992) undertook to econometrically test the hypothesis that British Columbia wine producers behaved non-competitively during the years 1957 to 1986. His econometric results supported the above hypothesis; proving a level of price collusion within what was believed to be an inherently oligopolistic industry. The results also suggested that the wine policy of the provincial government helped create a non-competitive industry. Adams proposed that *that* industry would have "difficulty competing in today's global market for wine."

Earlier work by Eyrl (1989) examines the structure, conduct and performance of the pre-free trade, British Columbia **grape** industry using an industrial organization framework and predicts the organization of the industry after the terms of the free trade agreement are in full effect. Eyrl concludes that the provincial government "sheltered" the growers from competitive forces and hence slowed response to market trends. A prediction of survival for the wineries was proposed assuming they are able to change consumer perception of B.C. product. Eyrl believed the transition for grape growers would be much more difficult as their buyer source would no longer be guaranteed, however, the $8,100/acre government allotment would ease the transition for the growers; allowing some to replant and others to exit the industry.

3.2 Porter Analysis - The Diamond of Competitive Advantage

This section highlights the state of the determinants identified in Porter's "Diamond of Competitive Advantage": factor conditions, demand conditions, related and supporting industries, and firm strategy, structure and rivalry. For each determinant, government's impact is also considered.

3.2.1 Factor Conditions

A principal finding in Porter's research on competitive advantage is that the most significant and sustainable competitive advantage results when a country possesses factors necessary to compete successfully in a particular industry which are both advanced and specialized. A country's stock of factors is less important than the rate at which they are created, upgraded, and made more specialized to particular industries. Investments in the creation of advanced and specialized factors often translate into sustained competitive advantage.

While British Columbia drew upon its abundance of natural resources for the creation of the grape and wine industry - rich soil, suitable climates, etc. - it remained weak in advanced factor creation. Combined with government protection, the grape and wine industry did not upgrade in the field nor in wine production technology to an extent that would product top quality wines.

In the crucial area of human resources, British Columbia faces tough challenges. There are shortages of skilled labour; technical and vocational schools are widely perceived to be second-rate; and low levels of industry involvement and co-operation with educational institutions discourage specialization and inhibit the development of relatively costly programs in science, engineering and technology fields. This description of British Columbia's human resources dilemma is an apt one for the B.C. wine industry. Wine-making skills are developed overseas and only recently have the local universities begun to offer training courses in field technologies. With the arrival of the FTA agreement, growers and winery owners appear to have recognized the need to upgrade skills and actively encourage and subsidize continuing education for their employees. Highly skilled wine-makers are now pursued by wineries which actively advertise their wine-maker's name and credentials, believing this to promote product quality.

3.2.2 Demand Conditions

Canadian buyers are typified as rarely at the leading edge in demanding innovative consumer goods. Additionally, they are reluctant, by American standards, to voice complaints or to utilize consumer advocacy agencies to pressure providers of goods and services to enhance their products. Canadian consumers, especially with respect to wines, have followed European and American trends. Rather than demand similar wines from local sources, consumers direct their purchasing power towards imported wine products and thereby send an indirect message to their local wineries

... page 14

that the products they are demanding are not being produced locally.

Additionally, industrial demand in British Columbia has typically been low-cost oriented which has constrained the scope for innovation across a range of industries. Prior to the FTA, this orientation was characteristic of the B.C. wine industry. Given that the major wineries were "forced" to buy the higher-priced, lower-quality, domestic grapes and coupled with the fact that their target market was for many years the low-priced, jug wine category, investment in innovative technologies was not applicable to their operation.

3.2.3 Related and Supporting Industries

World-class related industries can provide a country's firms with sources of technology, ideas and skilled employees that are advantageous in international competition. World-class local supporting industries often deliver the most cost-effective inputs. Geographically clustered related and supporting industries can create powerful spill-over effects that spur innovation and enhance competitiveness.

British Columbia's grape and wine industry cluster is both narrow and shallow. Key supply inputs such as machinery and equipment is sourced from foreign suppliers. In the wine industry's defense, its lack of size has discouraged equipment and materials suppliers from establishing locally. The only equipment purchased locally are tanks which are of top quality due to the fact that the large B.C. dairy industry is a primary user of

storage tanks as well. The greatest key input, grapes, has not been on the leading edge of technology due to the protection afforded by the provincial government which insulated that industry from any competitive pressures thereby contributing to the lack of technology creation, adoption and diffusion in B.C.

3.2.4 Firm Strategy, Structure and Rivalry

National circumstances and context strongly influence how companies are created, organized and managed as well as the nature of rivalry among firms in an industry. A striking finding of Porter's research was the vital role of domestic rivalry in contributing to international competitive advantage. The dynamism and pressure created by vibrant local rivalry was the single most important stimulus to innovation and upgrading in a significant number of industries, in both large and small countries.

British Columbia's high non-tariff barriers in the wine industry sheltered firms from external pressure. Weak domestic rivalry in the industry also contributed to inward-looking strategies. The high level of corporate concentration (as discussed in Adams, 1992) and interprovincial trade barriers dulled domestic rivalry in the B.C. wine industry. This weak rivalry also translated into higher consumer prices for wine as Adams (1992) also concludes.

3.2.5 Impact of Government on the Determinants

The government has played a vital role in shaping the B.C. wine industry's economic competition and development. This has magnified the industry's dependence on government, contributed to the creation of systemic barriers to innovation and upgrading throughout the industry, and re-inforced the role of basic factors in sustaining competitive advantage in the industry.

The FTA has been a powerful catalyst in favour of competitiveness and has strengthened competition in the domestic market. However, without the government subsidies directed at re-vamping the B.C. wine industry, it is doubtful whether the industry would have survived the FTA. The industry continues to lobby government for monies, however, the dollars received are aimed at promoting the industry rather than paying to keep inefficient producers in the industry.

Prior to the FTA, the old economic order of the B.C. wine industry was an internally consistent system in which the determinants were mutually consistent and reinforcing. Change would have been extremely difficult without the advent of the Free Trade Agreement. Phasing out the differential mark-ups and removing the 80/20 rule were two actions that created a domestic stimulus towards innovation and product enhancement. The wineries could no longer afford to rely on the insularity provided by previous government policies. Advantage of existing field technologies was taken; cultivating grapes that would produce good quality wines.

... page 17

Investment in highly skilled wine-making was undertaken as well as aggressive marketing campaigns that enhanced the image of the B.C. wine industry domestically and most recently internationally as well. To this end we have seen an marked increase in premium wine sales domestically which reflects the consumers acceptance and belief in the "new" industry. Local wines are winning at international competitions, thereby, providing opportunity for international sales to be achieved. These achievements reflect well on Porter's studies which maintain that direct involvement in international business must be a priority for the Canadian private sector to strengthen competition and improve incentives for innovation, investment and upgrading.

SECTION 4.0 BENCHMARK SITUATION - PRE-FREE TRADE AGREEMENT

4.1 Producer Organization/Market Structure

Grape growers are represented by two different organizations. The Association of British Columbia Grape Growers is composed of all grape growers, including those who produce only fresh market grapes. The Association was established in 1961 with its objectives being:

- to promote the interests of grape growers generally by disseminating information in respect of varieties, cultural practices, harvesting methods, prices and marketing;

- to promote agreement among growers in representations to governments at all levels;

- to co-operate with government at all levels with a view to improving the economic welfare of the grape growing industry;

- to co-operate with other horticultural or agricultural organizations or primary producers with similar objectives, as the directors may consider advisable;

- to assist grape growers in procuring supplies for the industry;

- to promote the production of certified, virus-free, true-to-name grape plants and to make such certified plants available to growers by whatever method appears most practical;

- to encourage and promote close co-operation with wineries in respect of varieties of grapes to be planted to meet winery needs.

Membership is voluntary for non-wine grape producers. Wine grape producers become members through licensing by the Grape Marketing Board. The Association executive consists of five producers elected at an annual meeting.

... page 19

The B.C. Grape Marketing Board was established in 1973 under the Natural Products Marketing Act. The Board represents all grape producers licensed to sell grapes to B.C. wineries. The Board possesses various powers to promote, control and regulate the grape industry, and to negotiate with wineries and government, programs, policies, prices and standards for the grapes delivered to wineries.

The Board consists of five producers elected annually by licensed grape producers.

Wineries do not work under any form of umbrella organization. Until 1989, there were two classes of wineries, estate and major. A classification of farm winery has since been implemented. Size and class of wineries were determined by license.

Basic Qualification for Estate Winery Licence:

The mid-sized wineries in British Columbia are called Estate Wineries. They must meet the following criteria:

- have a minimum size vineyard of 20 acres owned and operated by the applicant;

- minimum wine production of 34,000 litres
  maximum wine production of 181,000 litres;

- must source 100% of its grapes from B.C., and a minimum of 50% from its own vineyard;

... page 20

- within one year of licensing, all wine must be produced and bottled on site.

Retail sales through the LDB are possible upon application.

Basic Qualification for Major (Commercial) Winery Licence:

Major wineries are those with a commercial licence. A licensed major winery may take many forms. The licence is issued to individuals involved in the manufacture, packing and sale of cider, non-grape fruit wines, sake and mead, in addition to grape wine manufacturers who do not qualify, or who do not desire an estate or farm winery licence.

There is no vineyard acreage required. There is no specific minimum or maximum allowable annual production. Major wineries may apply to have their products sold in government liquor stores.

Major wineries are not restricted to a particular source of raw materials, however, since 1962 the B.C. Liquor Control Board (LCB) has imposed a law on the major wineries requiring them to purchase a minimum percentage of their grape needs domestically before the wineries were allowed to import grapes from outside the province. Various quota levels were tried until 1969 when the B.C. content rule was set at 80% with no further increases. The rule states that the major wineries were committed to have contracted acreage with British Columbia grape growers, each year, equivalent to 80% of their British Columbia sales in the previous year.

... page 21

While in the past, the B.C. wine industry was primarily major wineries competing in the jug market, there began to be a recognition that the jug market was being eroded by cheaper imports and success was to be found in the smaller, "premium" wine market. This phenomenon appeared to be occuring globally and therefore independent of the Free Trade Agreement as well. The statistics show an increase in Estate wineries, those producing less than 181,000 litres annually. In 1985, there were a total of 8 wineries; 7 major and 1 estate. By 1988, there were 6 estate wineries and 6 majors for a total of 12. (See Table 4.1.1 below)

Table 4.1.1 Numbers and Types of Wineries

Winery Type	1985	1988	1991	1993	1994
Major	7	6	6	6	5
Estate	1	6	10	10	11
Farm	0	0	5	5	11
TOTAL:	8	12	21	21	27

Source: B.C. Grape Marketing Board, 1994.

This growth was comparable to the California wine market whose smallest, but fastest growing segment was the premium market generally characterized by hundreds of small, often family run wineries, competing in a very specialized high quality product.[11]

[11]British Columbia Grape Marketing Board, 1989.

Basic Qualifications for Farm Winery Licence:

Prior to 1989, this smallest class of winery did not exist. Basic qualifications for a farm winery license are:

- minimum vineyard size of two acres owned and operated by the applicant;

- minimum wine production of 4,540 litres;
  maximum wine production of 45,400 litres;

- source of grapes must be 100% B.C. grown, of which 75% must come from the winery's farm;

- within a year of licensing all wine must be produced and bottled on site;

- retail sales through the LDB stores are not expected because of the small volume of wine.

4.2 Prices

The negotiating strength of the B.C. Grape Marketing Board eliminated any "free market" price fluctuation. The following, Table 4.2a, shows a fairly steady increase in prices annually. The cyclical "free market" price fluctuations, typical of an agricultural product, are absent.

... page 23

Table 4.2a B.C. Average Price/Ton

	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93
All Varieties	562	613	597 *	580	655	692	957	915	951	977	968

Source: **B.C. Ministry of Agriculture, Fisheries and Food, Provincial Grape Industry Specialist; (prices are an average of Processed, fresh and local sales, however Processed constitutes 95% of the total production and value.)**

*** Note:** In 1985, the federal and provincial governments purchased the 1985 red wine grape crop from licensed contract growers at an average price of $346 per ton.

The average price for all varieties rose only 23% between 1983 and 1988. This nominal increase is also reflected in the price for varietals during the same period. As seen in Table 4.2b below, a premium was paid for varietals but prices still were controlled under the negotiating arm of the FVGMB and rose only 8.2% during the same time period.

Table 4.2b B.C. Vinifera Price/Ton

	'83	'84	'85	'86	'87	'88
All Varieties	747	755	738	808	808	808

Source: **B.C. Grape Marketing Board**

Unlike the free market situation in California and Washington, prices in B.C. do not necessarily reflect the characteristics of the region in which they are grown or the grape itself. However, there is a bonus/penalty system based on pH and sugar content. Prices during this period of time were set by the B.C. Grape Marketing Board and major wineries were legally forced to comply with these prices or risk

... page 24

losing their commercial license.

While grape price increases were nominal, prices received by wineries for a 750 ml. bottle of white wine had increased by an even smaller margin. Table 4.2c below outlines the price changes.

Table 4.2c Net Selling Price of B.C. White Wine (FOB Winery)

	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94
White	1.90	1.87	1.61	1.90	1.90	2.01	2.02	1.97	2.09	3.58	3.26	3.47

Source: **B.C. Liquor Distribution Branch**

Between 1983 and 1988 prices increased by only 6%, despite the fact that the cost of B.C. grapes had increased by, at a minimum, three times this amount. By comparison, the price of an imported 750 ml. bottle of white wine increased by 43% over the 1983 - 1988 period.

Table 4.2d Net Selling Price of Imported White Wine (FOB Winery)

	'83	'84	'85	'86	'87	'88	'89	'90	'91'	'92	'93	'94
White	1.44	1.17	1.12	1.17	2.82	2.06	3.02	3.00	3.02	2.55	2.61	2.70

Source: **B.C. Liquor Distribution Branch**

Prices shown above are the prices paid by the Liquor Distribution Board to the wineries. These prices do not include any transport costs or importing costs. As far as the LDB is aware, these are the prices for the wine itself. Any changes are due only to the cost of the imported wine. The LDB buys direct from the B.C.

... page 25

wineries, however, they deal with agents when buying imports. It is unknown whether the agent takes any commission from the "cost" portion of the invoice. The LDB pays a "domestic charge" to the agent on top of the "cost" of wine. For example, a case of imported table wine costs $32.40 or $2.70 per 750 ml. bottle. The LDB pays the importing agent the $32.40 plus a $7.52 domestic charge which normally would include the agent's profit, freight, warehousing charges, custom account charges, etc. Mark-ups, taxes and duties are not included.

4.3 Production: Domestic and Imported

B.C. Liquor Board sales data has been used here to estimate production. Responses to surveys was inadequate to otherwise portray wine production. Virtually every estate winery sells its entire production and major wineries rarely keep more than one year's inventory. "Production", as reflected in the sales data below, at the Estate winery level has been on the rise since 1984. Major wineries' production has generally been declining as evidenced by the tables below:

Table 4.3a Domestic Wine Sales (litres per year)

	('000s)									
YEAR	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
B.C. Major Wine	23,110	21,586	21,590	20,667	19,873	17,444	16,349	15,492	14,477	13,155
B.C. Estate Wine	160	216	426	468	626	602	648	837	1,041	1,212

Source: **B.C. Liquor Distribution Branch**

The above wine sales include all wine products. The Major wineries have seen a decrease in sales of 14 percent over the five year period (1984 - 1988), whereas the

... page 26

Estate wineries have realized an increase in sales of 290 percent over the same five year period (1984 - 1988). Table wines constitute approximately 87 percent of total winery production for Major wineries and approximately 93 percent for Estate wineries. The table below outlines the trends in table wines, again over a 10 year period, (1984 - 1993); however, this section of report is specifically looking at the 1984 - 1988 time period to establish the benchmark situation.

Table 4.3b Domestic Table Wine Sales (litres per year)

('000s)										
YEAR	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
BC Major										
White	14,726	13,624	14,458	15,175	13,731	12,201	11,476	10,983	10,198	9,156
Rosé	72	64	46	41	41	29	16	12	14	13
Red	5,045	5,295	4,848	4,181	3,817	3,120	2,827	2,634	2,554	2,423
Total Major:	19,844	18,984	19,354	18,397	17,591	15,352	14,320	13,630	12,766	11,592
BC Estate										
White	117	161	323	374	516	503	537	702	875	1,009
Rosé	7	11	14	5	6	6	7	10	10	16
Red	29	39	84	85	103	93	103	123	152	183
Total Estate:	154	212	422	464	626	602	648	836	1,036	1,208
Total Commercial & Estate:	19,998	19,196	19,776	18,861	18,217	15,954	14,968	14,466	13,802	12,800

Source: **B.C. Liquor Distribution Branch**

Major wineries have seen a decrease over the five year period of 11 percent or 2,252,820 litres. Estate wineries on the other hand have seen an increase of 305 percent, or 471,742 litres, over the same time period. The 11 percent decrease is almost four times as large as the 305 percent increase in estate sales. Therefore,

... page 27

there was a general decline in the domestic industry of approximately 1 percent or 1,781,078 litres. To try and explain the decrease, one should look at products that could be considered substitutes for domestic wine and also the per capita domestic consumption of wine.

Table 4.3c Imported Table Wine Market Sales (litres per year)

('000s)										
YEAR	**1984**	**1985**	**1986**	**1987**	**1988**	1989	1990	1991	1992	1993
Imports										
White	9,473	9,403	8,424	7,779	7,738	9,241	9,817	9,788	9,801	9,850
Rosé	248	237	236	209	240	325	484	512	528	523
Red	3,716	3,611	3,492	3,493	3,687	4,436	4,824	5,221	6,064	6,891
Total Imports:	13,439	13,253	12,154	11,482	11,667	14,002	15,125	15,520	16,393	17,264

Source: **B.C. Liquor Distribution Branch**

Imported table wines decreased as well over the same five year time period. Total imports decreased by 13 percent or 2,015,796 litres between 1984 and 1988. Given that imported wine sales decreased, it does not help explain the decrease in domestic table wine sales between 1984 and 1988. Also, the per capita consumption of wine shows an overall increase over the five year time period and therefore does not account for the 1 percent decrease in domestic table wine sales nor the 13 percent decrease in imported table wine sales.

... page 28

Table 4.3d Canadian Per Capita Consumption of Wines (litres)

YEAR	1984	1985	1986	1987	1988
Wines	8.92	9.69*	10.00	9.64	9.35

Source: **Province of British Columbia, Annual Statistics, Ministry of Agriculture, Fisheries and Food.**

***Note:** Data figures for 1984/85, show British Columbia's per capita consumption of wine as the highest in Canada at 16.17 litres, 67% higher than the national average. This figure bodes well for provincial wine producers.

In order to account for the decrease in table wine sales, one could consider wine coolers as potential substitutes for table wine. The following table depicts the sales of domestic and imported coolers over the 1984 - 1988 time period.

Table 4.3e Cooler Market Sales (litres per year)

	('000s)									
YEAR	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Domestic Wine Coolers	1,265	3,783	4,437	6,071	6,123	4,965	4,830	3,865	3,293	2,660
Imported Wine Coolers	0	.869	.376	83	205	377	420	432	429	265

Source: **British Columbia Liquor Distribution Branch, Quarterly Market Review of Provincial Liquor Sales**

The above table shows large increases in both the domestic and imported wine cooler markets. The domestic market saw an increase of 384 percent or 4,857,848 litres. Imported wine coolers came onto the B.C. market in 1985 and increased by 23,565 percent or 204,782 litres. An overall increase in the wine cooler market of

... page 29

5,062,630 litres more than compensates for the decrease in the table wine market of 3,796,874 litres resulting in a net increase in the sales of wine products of 1,265,756 for the five year period. On a per capita basis, the Canadian consumption of coolers was as follows:

Table 4.3f Canadian Per Capita Disappearance of Wine Coolers

(litres per year)					
YEAR	**1984**	**1985**	**1986**	**1987**	**1988**
Wine Coolers	.05	.15	.17	.23	.23

Source: **Statistics Canada, personal reference.**
British Columbia Liquor Distribution Branch; Quarterly Market Review of Provincial Liquor Sales

4.4 Profitability

Given the lack of data and subsequent assumptions, one must be very cautious in discussing industry profitability. Cost of production data is very difficult to obtain from this private enterprise industry. A time series analysis had to be constructed based on one cost of production figure from a study Price Waterhouse conducted in 1993. This analysis is presented in Section 6.4 **"Changes in Profitability".** The problem in using one cost of production figure, is that simply deflating back to previous years means profitability is guaranteed (as long as unit price has increased over the same period). This granted, prior to 1991, profit per litre varied minimally. Profit per litre was $1.49 in 1986 and $1.48 in 1989. Revenue per litre had increased only 6 percent during this period, which is consistent with the fact that prices were negotiated and quality of wine had not altered to any

significant degree.

In summary, industry profitability during the pre-free trade period was obtained largely through economies of scale. Major wineries dominated the industry with their production of jug wine; large scale production at low cost and low revenue. This segment of production was experiencing a decline in sales; ceteris paribus, profitability in the industry was also on decline. Continuing to use table wine to estimate sales/production, (on average, sales of table wine constituted 89.3% of B.C. winery sales between 1986 and 1989) the following Table 4.4 demonstrates the decline in sales between 1986 and 1989.

Table 4.4 B.C. Winery Sales (litres)

	1986	1989	% Change
Sales of Table Wine (litres)	19,775,905	16,729,819	-15.4

Source: BCLDB Quarterly Market Review, 1991 and 1987.

The above decrease in sales combined with decreased, though negligible (0.67%) profit per litre during the same period, is assumed to define an overall decrease in profitability for the B.C. wine industry prior to 1989.

SECTION 5.0 TRADE - RELATED FACTORS: POLICY AND PROCEDURAL CHANGES

5.1 Industry Policy

The grape and wine industries have been regulated, legislated and influenced by government from the outset. Some legislation has protected the grape industry. As a condition of licensing, wineries were compelled to buy all grapes produced locally before they were allowed to import. However, other legislation protected the wineries which also, given the 80/20 rule, further protected the derived demand for domestic grapes. In 1978, the Select Standing Committee on Agriculture stated that British Columbia has one of the highest cost structures in the world, with grape and labour costs allegedly being the highest for any known grape and wine region in the world.[12] Reason followed to the Committee that the wine industry in British Columbia could not compete, without protection, in the marketing and production of jug wine.

The government has had to contend with pressure from many different and often opposing forces. The wine industry pressured the government for protection. Many, if not most of the public desired less control over the use of alcohol. The temperance movement, if it could not have prohibition, pressured the government for tight control over the use of alcohol. And while the government's official mandate was to control the use of alcohol, the reality was such that the

[12]McGuire, Dennis W., The Political Economy of the Grape and Wine Industry in British Columbia and the Impact of the Free Trade Agreement, (1991) p. 14.

government's monopoly power in the sales of alcohol made it a very lucrative source of government revenue, providing the impetus to promote, rather than control its use.

The most influential regulation of the LCB to affect the grape and wine industries came in 1960. The government used the LCB as an instrument for economic development, creating a grape industry many times larger than the market would otherwise support if left to its own forces.[13] W.A.C. Bennett, then premier of the province, and one time part owner of one of the first wineries in British Columbia believed that if wineries were to sell their product through government controlled liquor stores then they should do their part in promoting and supporting British Columbia's grape industry. The wineries were thus required to purchase a minimum of their grape needs domestically before importing grapes. The minimum was set at six percent (6%) in 1960, was raised to 50% in 1962, 65% in 1965 and by 1967 it was set at 81%. The resulting guaranteed market for B.C. grapes saw acreage under vines increase by 400% in the first four years following this LCB intervention. By 1970 grape under vine production was at 2,414, an increase of 422% over the 572 acres in 1960. By 1975, plantings expanded to 3,066 acres.

With the threat of losing the reliable and economic California sources and being at the mercy of unreliable vintages, in 1969, the LCB decided to set the quota at 80%

[13]McGuire, Dennis W. (1991) p. 9.

and have no further increases. This content rule has since been known as the 80/20 rule stated that commercial wineries were committed to have contracted acreage with British Columbia Grape Growers, each year, equivalent to 80% of their British Columbia sales in the previous year. Interestingly, despite this protection to growers, they did not ever manage to satiate 80% of the needs of commercial wineries for white grapes. The local content of grapes in white wine was in approximately 20 - 25% depending on the harvest. A greater percentage was not used due to the fact that the market was historically 80% red wine and acreages under vine reflected this demand. As consumer demand began to switch to white wine, the Okanagan Valley began to drown in a sea of red wine. New plantings of white grapes were initiated, killed in the frost of 1978-79, and only by 1983 enough white vines were planted so that when full bearing, would have satisfied by 1988 the demands imposed by the 80/20 rule.

Government intervention and policy flows from both the provincial and federal levels. These interventions have affected production, marketing and distribution of B.C. grapes and wine.

The marketing board established in 1973 gave the grape growers, previously amalgamated somewhat loosely under the Association, market power. The marketing power of the Board was indirectly reinforced by 80/20 rule. This made the Board basically a price-setting board. The wineries were forced to deal with the growers and virtually forced to buy local grapes at the price set by the Board. The Board's primary function was to "negotiate" prices with the wineries on behalf

... page 34

of the growers. The 80/20 rule placed the board in a favourable negotiating position with the wineries, because the wineries were unable to withdraw from price negotiations with the Board. Any attempts by the wineries to withdraw from this "forced" contract position, were met with threats by the government to revoke the winery's licence. Realistically, the Grape Marketing Board "dictated" prices.

The growers also saw protection in the form of government supplied crop insurance, research and development, ARDSA programs (Agri-Food Regional Development Subsidiary Agreement), the Agriculture Credit Act, Agricultural Stabilization Act, etc. These forms of protection influenced the domestic costs of production and were seen by other producer countries as offering unfair competitive advantage.

The provincial Liquor Distribution Board (LDB) provides the wineries with protection through controlled marketing and distribution. Most important policies were:

- preferential mark-ups for B.C. products;

- automatic store listings for B.C. products with restrictions on imports' listings;

- controlled size restrictions on imports;

... page 35

- store promotions for domestic products.

The preferential mark-ups afforded to B.C. products have been in existence since 1932. In 1971, the provincial mark-up on local wines was approximately 35%, 45% on other Canadian wines and 55% on imported wines.(Hoeter, 1971, p. 31)[14] By 1988, these mark-ups were 55% on local product and 117% on imported products. This mark-up differential made it possible for B.C. wines to compete with the commercial wine industry three hundred times its size in California in a market segment in which California possessed the comparative advantage.[15] This advantage is evident in the Midi Valley in France and in other large valleys in Russia, Algeria, Chile, and Argentina.[16]

The federal government further protects domestic interests with its import tariff. This tariff has been set at Cdn.$0.20/gallon on bottled table wines, no tariff on "vinifera" grapes or juice, and Cdn. $0.01/litre or "free" for "labrusca" juice.[17]

B.C. also saw an advantage in packaging. Only local wines could be sold in different size bottles.

---

[14]McGuire, p.15.

[15]McGuire, p. 15.

[16]McGuire, p.16.

[17]Mathieson, David S. Canada - United States Bilateral Free Trade" the Prospects for the British Columbia Grape and Wine Industry, April 1988, p. 9.

There also were no rules regarding amelioration[18] in British Columbia and this was found to be the most effective way to off-set the high-priced B.C. grapes as dictated by the Grape Marketing Board.

DREE (Department of Regional Economic Expansion) grants were available that returned to a winery, one third of the cost of any new capital invested in the industry or a five year income tax break.[19]

While the LDB provides B.C. wineries with protection, it also makes the B.C. market easily accessible for imported products. Conversely, the United States effectively inhibits Canadian entries due to the difficulty in penetrating the U.S. market. The majority of the United States works on an open market system. This system consists of brokers, distributors, and retailers where high volume sales and large advertising budgets were said to be crucial to market survival. Today there are many small, U.S. estate wineries selling into the U.S. market successfully. The U.S. federal government also imposes a $0.375/U.S. gallon tariff for containers smaller than one gallon U.S., and U.S.$0.625 for containers larger than one gallon U.S. on still wine. [20]

---

[18]A wine maker's widely-used term which covers cellar practices, some of which are necessary and others of which are illegal. Strict laws cover these practices in most wine-producing countries. Amelioration could make a small amount of wine juice go a long way.

[19]McGuire, p.16.

[20]Mathieson, p.10.

Tariffs on wine products are low and have little influence on the trade in wine. Canadian tariff rates are C$0.04 per litre for still-grape wines while U.S. tariffs are higher at U.S.$0.09 per litre.

The British Columbia wine industry may have been "protected" by various government policies, but it was also subjected to very high levels of taxation, high input costs imposed by the 80/20 rule, limited flexibility in marketing and distribution, and exposed to a high number of competitor products through the easy access to the British Columbia Liquor Distribution system.

Of great importance in influencing trade are market access and distribution. In Canada, provincial governments, through their liquor distribution agencies, control market access and pricing structures through listing, distribution, and pricing practices. While appreciated for the ease of distribution and listing, the pricing practices were major irritants to Canada's trading partners; particularly the United States and the European Community. Complaints led to inclusion in the negotiation of a Canada -- U.S. Free Trade Agreement (FTA) and GATT rulings that required "National Treatment" for imported products.

5.2 The Free Trade Agreement

The Free Trade Agreement (FTA) of October 4, 1987, between Canada and the United States contains three pages dealing exclusively with the wine industry. They are covered under Chapter Eight: Wine and Distilled Spirits and include Article 801: Coverage, Article 802: Listing; Article 803: Pricing; Article 804:

... page 38

Distribution; Article 807: International Obligation and Article 808: Definitions. Articles 805 and 806: Blending Requirement and Distinctive Products, respectively, deal with Distilled Spirits.

The FTA affects provincial Liquor Distribution Board listing and pricing policies as summarized below:

Listing Policy:

- conform with the *GATT national treatment* obligation. This means that once goods have been imported into either country, they will not be the object of discrimination;
- be non-discriminatory;
- establish administrative appeal procedures for listing decisions;
- be transparent;
- be based on normal commercial considerations;
- not create disguised barriers to trade;
- ensure listing criteria is public.

Pricing Policy:

- allows a provincial liquor board or any other public body distributing wine to charge the additional cost of selling the imported product. Differential charges on wine which exceed this amount are to be reduced over a seven-year period from 1989 to 1995;

... page 39

- a base differential shall be calculated by subtracting the permissible cost -of-service differential from the mark-up differential applied by the "competent authority"[21] as of October 4, 1987;

- 25% of the differential in markup between the product of Canada and the United States will be eliminated as of January 1, 1989, an additional 25% as of January 1, 1990, and the remaining will be phased out in equal steps of 10% decreases until January 1, 1995 and beyond when 0% of the base differential remains;

- any other discriminatory pricing measure will be eliminated immediately.

The FTA virtually eliminates any of the former import-discriminating tactics of the LDB and is worded in an attempt to prohibit new protectionist strategies from being implemented.

The FTA allowed Quebec to continue its requirement that wine sold in grocery stores be bottled in the province, provided there are alternative outlets, such as the liquor stores, available for U.S. wines; private wine stores in British Columbia and Ontario were permitted to continue operating; existing listings of estate wineries in British Columbia could be retained. U.S. state-controlled liquor

---

[21]The International Trade Communications Group, Department of External Affairs, The Canada - U.S. Free Trade Agreement, Ottawa, Ontario, 1987. p139.

agencies, which are the equivalent of Canada's liquor control boards, were required to accord Canadian wines national treatment.

5.3 The GATT Ruling

Prior to the FTA, the EC had launched a formal complaint regarding provincial liquor board practices with regard to listing, pricing and distribution. A 1987 GATT panel upheld this complaint and found these practices to be inconsistent with Canada's international trading obligations. An agreement, fashioned after the terms and conditions of the FTA, was subsequently reached with the EC and extended on a Most Favoured Nation (MFN) basis to all members of the GATT. The agreement provided for immediate *national treatment* for listings and distribution and for a more measured phasing out of the differences in price mark-ups that extend beyond those accounted for by costs of service.

5.4 Interprovincial Barriers

Interprovincial barriers continue to fragment the Canadian wine industry. These barriers impede the free movement of domestic wines across Canada. They limit the opportunity for major wineries to completely rationalize production and achieve maximum production efficiencies. The smaller, estate and farm wineries are also constrained by these barriers from serving the entire Canadian market.

Domestic wines may be retailed at the winery and may have access to wider distribution systems than imported wines through either winery outlets or company retail stores, but less than 5 percent of domestic wines are sold through

... page 41

these channels.[22] Quebec domestic wines get an additional boost by being sold through grocery stores in that province.

5.5 Effects of Trade-Related Factors on the B.C. Wine Industry

5.5.1 Graphical Analysis of the Impact of B.C.'s Domestic Policies on the International Market

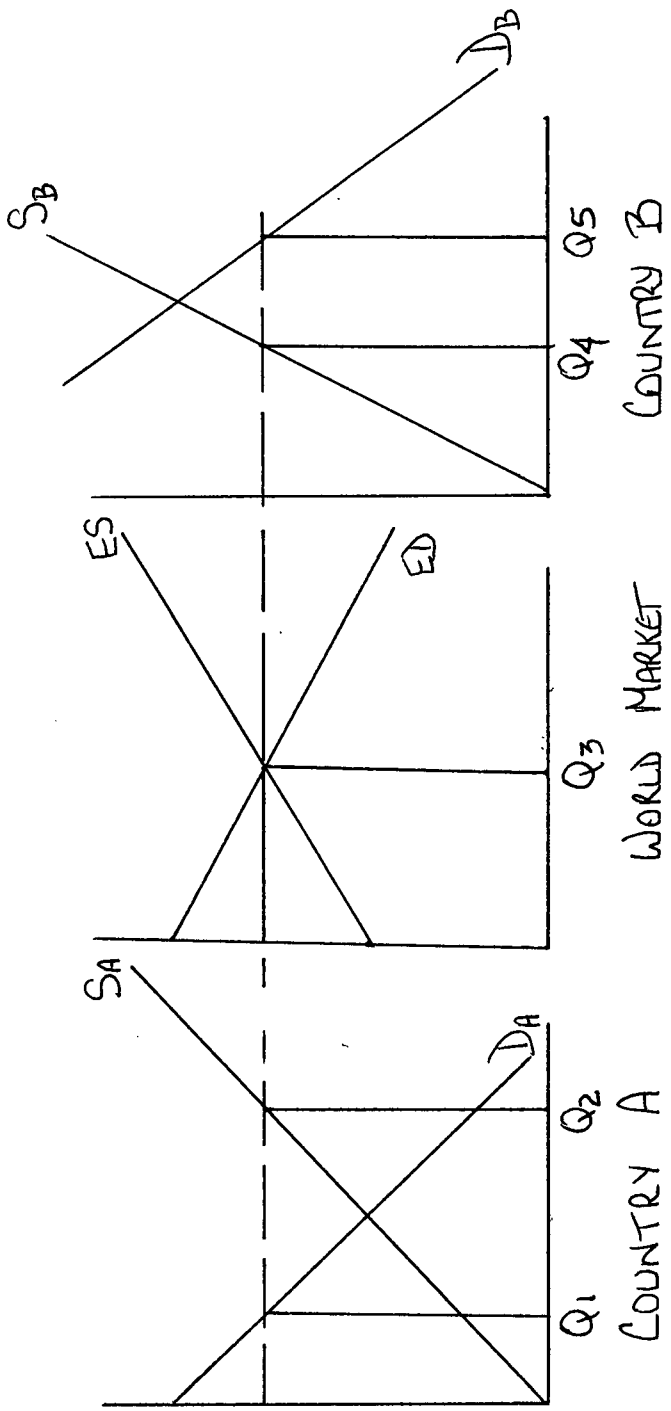
The model, shown as Figure 5.5.1 on page 42A, employed is a simple, static one using excess supply and demand functions for a single-commodity (wine), two country world.

Assuming Country A is the low-price producer, in the absence of trade, domestic price would be P_A. For prices above P_A, producers in Country A would produce more than domestic consumers would buy. Thus we can trace out an excess supply function (E_S) for Country A, the supply function of exports onto the world market.

We assume Country B is characterized by higher costs and large domestic demand relative to production potential. This country is represented by S_B and D_B, the country's domestic supply and demand functions for wine. In the absence of trade, price would be P_B in Country B, which by construction and assumption is above P_A in Country A. For prices below P_B, consumers in Country B would demand more than producers would produce. As price

[22]Food Products Branch, Industry, Science and Technology Canada, Industry Profile 1990 - 1991 Wineries, Ottawa, Ontario 1991. p. 4.

Figure 5.5.1 Static Two-Country Trade Model



... page 42A

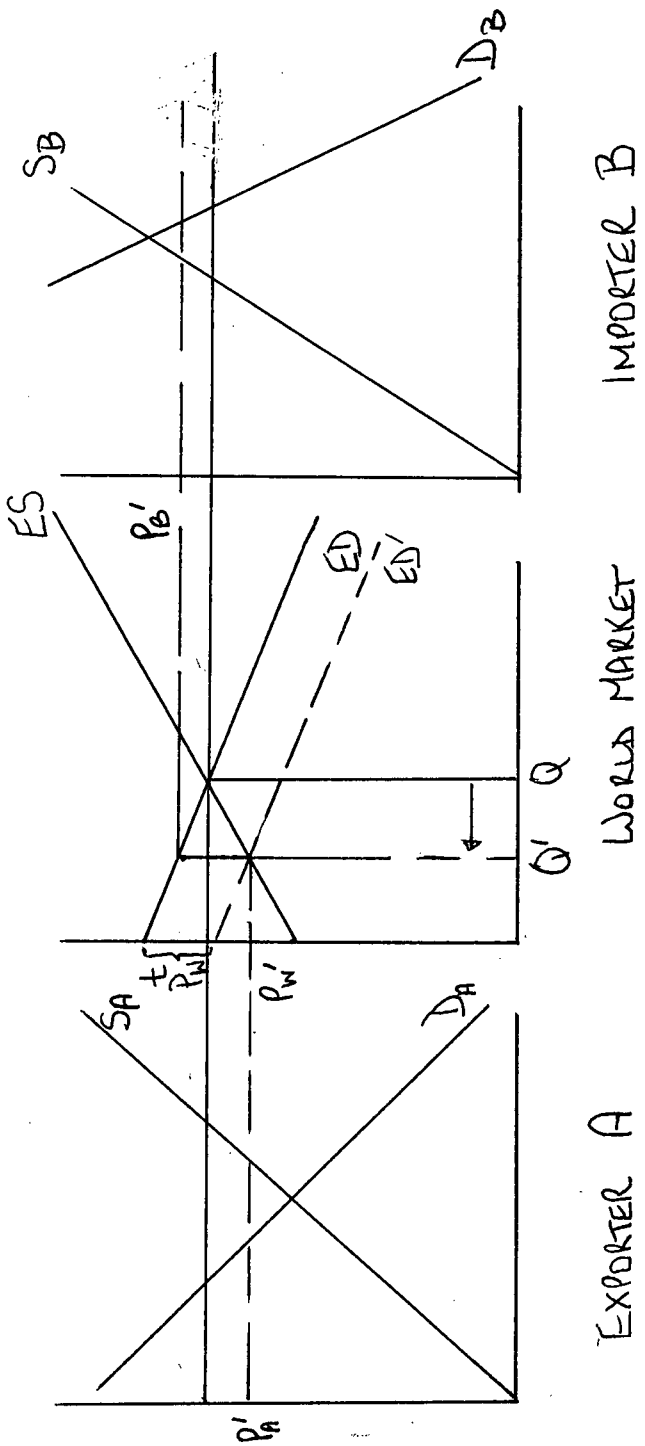
fell, this difference would grow, thus tracing out an excess demand function (E_D). This is the demand function for imports from the world market. Now let there be trade between Countries A and B, for simplicity assuming zero transportation costs. Equilibrium in the international market occurs where $E_S = E_D$, yielding a world price of P_W. Country A exports (Q_2 - Q_1) which is equal to Q_3, the volume traded in the world market, and is equal to (Q_5 - Q_4), Country B's volume of imports.

With this basic model, it is straightforward to explore the most basic form of international interdependence. Assuming a per-unit tariff on imports, one can look at the result this type of tariff would have on the world market and on Country A.

As shown in Figure 5.5.2 on page 43A, the imposition (Country B) of a tariff equal to *t* essentially shifts their excess demand downward by the amount of the tariff to E'_D. World price, and hence, the price in the exporting country falls to P'_A; price in the importing country rises to P'_B (they differ by *t*) and the volume of trade falls to Q' from Q. Intervention reduces trade, with a tariff decreasing world prices. The tariff raises prices in the importing country by making imported products more expensive: it represents a combined producer subsidy and consumer tax in the importing country.

Such a tariff policy, which shifts the trade curves by a fixed amount per

Figure 5.5.2 Static Two-Country Trade Model with Tariff



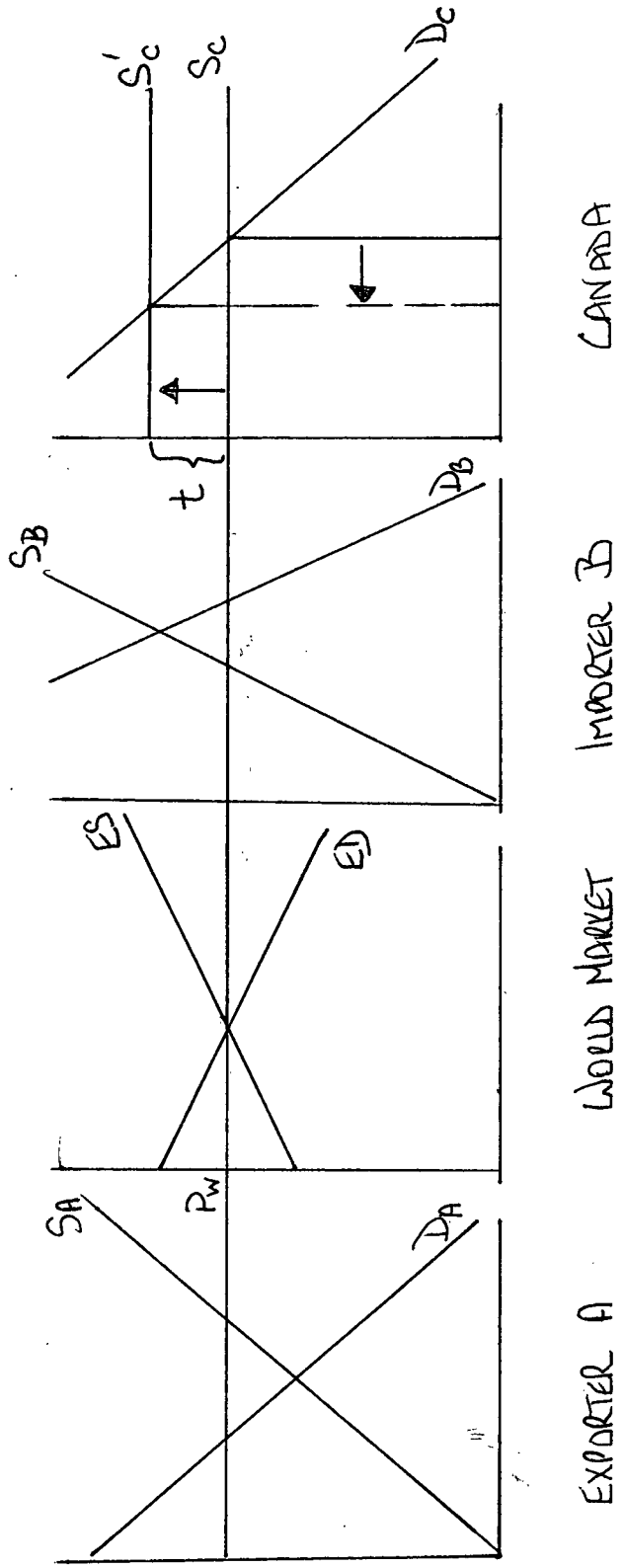
... page 43A

unit, does not alter the stability of market prices (in terms of absolute price variations). The slope of the excess demand and supply curves is preserved. Consequently, any exogenous shift in supply, for example, in the market will have the same price change effect as with free trade. Per-unit protection shifts world price but does not alter its variance.

The above analysis, however, is not an appropriate model for Canada, as Canada is a price taker and cannot affect the world price of wine. Figure 5.5.3, shown on page 44A, adds a panel to the above analysis that depicts the situation in Country C, Canada, the price taker.

The world price in effect, stops at Canada's border. The price increases according to the level of mark-up applied to imported wines. The mark-ups applied to imported wines can be converted to tariff equivalents. As seen above, the amount, t, is the mark-up, or tariff, policy in Canada that alters market prices by a fixed amount per unit. Prior to the FTA, domestic wines had relative protection based on the fact that the domestic mark-ups were less than the mark-ups on imports. Following the FTA and GATT rulings, the relative protection on B.C. wines is decreasing. Ceteris paribus, one would expect to see a cut back in sales and decreasing production. If there had been no change in product, one would have seen a decrease in production combined with a leftward shift in demand, which is what has basically happened to major wineries' sales of table wine.

Figure 5.5.3 Static Three-Country Trade Model with Tariff



... page 44A

However, the B.C. wine industry improved its product and created demand for a premium wine product that has grown steadily since 1988. The industry is confident that consumption of V.Q.A. wines can be increased annually for some time to come. B.C. has been able to hold its own with respect to market share by creating demand for its premium product. The increasing sales of estate wines have countered the decreases in major wineries' table wine sales to the effect of showing a fairly steady per capita consumption of table wine since 1988, showing a slight decrease in 1991.[23]

It was conceivable that without industry restructuring, the B.C. wine industry would have experienced a significant reduction in its size following the FTA and GATT ruling. But what we do not know is how much restructuring would occur if there were no government assistance programs. Easier access by imports to the B.C. market without the elimination of the government imposed restrictions on B.C. wineries mentioned above, would allow for the downsizing. The wine industry lobbied the government to finance a wine industry productivity program to maximize international competitiveness. The result was the Grape and Wine Adjustment Assistance Programme (GWAAP) providing $28 million to the grape industry in British Columbia to adjust grape acreage, varieties, production and to assist in the promotion of qualifying wines. A total of 2,308 acres of grapes were removed, mostly consisting of French hybrid and vitis lubrusca

[23]British Columbia Wine Institute. *Annual Report 1991,* pg. 8.

... page 45

varieties. The BCGMB stated in a brief (June 7, 1989):

> The basic assumption of the present grape and wine adjustment program has been that if we are going to survive as an industry we must move into the production of premium grapes and premium wines in British Columbia. Indeed all the evidence from other high cost wine producing regions leads to the inevitable conclusion that premium grape and premium wine production are the only viable directions for a future grape and wine industry in British Columbia. Because of our present circumstances, we could add to this statement that any strategy of moving towards the best and highest use of our grape and wine making resources must also be accomplished very quickly. The window of opportunity for both growers and wine makers is indeed limited in the short transition period we now face.[24]

The GWAAP assured growers seven-year contracts with wineries for grape acreage planted at that time. Grape prices were fixed until the 1994 harvest at 1987 prices. A 4% cash cost escalator was provided by GWAAP payable on a per acre basis added for each year up to and including 1994. Following 1994, prices will be determined on a free market basis as is done in neighbouring states.

---

[24]McGuire, Dennis W., The Political Economy of the Grape and Wine Industry in British Columbia and the Impact of the Free Trade Agreement, Kelowna, 1991.

Restructuring was so significant that of the 10 grape varieties providing the greatest tonnage to wineries in 1979, only one was delivered in 1990. (Vielvoye, 1991). In 1983, there were only 232 acres of the top ten vinifera grapes, approximately 8% of total acreage planted. In 1992, there were 857 acres of the same vinifera; an increase of 269 percent.

The supply of grapes to B.C. wineries comes primarily from B.C. as major wineries no longer import grapes. They do, however, import wine, must and grape juice mainly from California and Washington State. Other prominent sources are Germany and France. (Vielvoye, 1991, p.52)

Table 5.5a Raw Material Sources for British Columbia Wineries - 1990

SOURCE	MATERIALS USED
B.C. Grapes	4,827 tons
Imported Must	80,000 litres
Imported Juice	2,822,500 litres
Imported Wine	6,948,195 litres

Source: John Vielvoye, Provincial Grape Industry Specialist, B.C. Ministry of Agriculture, Fisheries and Food, 1991, p. 52.

It was also deemed necessary that, in order for the B.C. wine industry to have a better chance at competing in the FTA environment, government reduce unnaturally high input costs. The industry felt it necessary that tariffs on bottles, packages and printed materials also be lowered at least at a pace similar to the lowering of wine barriers.

While the "boutique" or estate and farm wineries serve a small market niche, major wineries continue to face a major handicap in the larger, commercial market due to production inefficiencies based on economies of scale. The interprovincial trade barriers have not been removed in conjunction with the FTA and GATT ruling, although attempts at retailing B.C. wines in Ontario and vice versa have recently taken place with an "industry swap" of products.. Also, until the end of 1994, wineries must honour contracts with existing growers at prices negotiated with the B.C. Grape Marketing Board in 1989.

SECTION 6.0 INDUSTRY CHANGES AS A RESULT OF POLICY AND PROCEDURAL CHANGES (FTA, GATT, ETC.)

6.1 Changes in Pricing

In this section an analysis of both grape and wine pricing strategies is carried out. Considering that the cost of grape materials constitutes 27% of the cost of selling a litre of wine (in 1991/92 on a total cost basis the share of grapes ws $3.2 million), it is important to detail the procedural changes of grape pricing.

6.1.1 Grape Prices

As a result of their favourable negotiating position, British Columbia grape growers received much higher prices for their grapes than were available in Washington and California. See table below.

Table 6.1.1a Grape Prices - All Varieties 1990 (CDN$/Ton)

	B.C.	ONT.	WA.	ORE.	CALIF.
ALL VARIETIES	909	775	**470**	960	**366***

Source: Vielvoye, 1991.

*** Note:** This price is significant if one were comparing like products. However, the majority of grapes purchased from California by British Columbian wineries are of the Thompson Seedless variety. Thompson grapes do not possess strong varietal character and therefore can be blended to produce many types of wine. Varietal prices in California compare with those in British Columbia and in some states cost as much as 60 percent more based on region of origin and grape quality. See Table 6.1.1b below for a price comparison of Chardonnay grapes.

Table 6.1.1b Chardonnay Grape Prices (CDN$/Ton)

Variety	Washington	Oregon	California Central-Napa	Ontario Min. - Max.	B.C. Min. - Max.
Chardonnay	$1,135	$1,197	$759 - $1,902	$410 - $1,706	$882 - $1,167

Source: **Bremner, Lynn. *1993 Price Comparisons (Cdn. Dollars).***

Given that prices continued to be negotiated by the Marketing Board, the following table depicts the fact that grape prices continued a steady, even increase from 1989 through to 1993. (see Table 6.1.1c) This is as expected as the prices are still insulated from the fluctuations of a free market situation.

Table 6.1.1c B.C. Average Grape Price Per Ton

	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93
All Varieties	562	613	597 *	580	655	692	957	915	951	977	968

Source: **B.C. Ministry of Agriculture, Fisheries and Food, Provincial Grape Industry Specialist; (prices are an average of Processed, fresh and local sales, however Processed constitutes 95% of the total production and value.)**

The average price for all varieties rose only 1.14% between 1989 and 1993. The 38.3% increase in price between 1988 and 1989 is suggested to reflect the change in grape production; from lower-priced labrusca varieties to higher-valued vinifera. Between 1988 and 1989 acreage dropped from 3,456 to 1,047 acres (see Table 2.1.2) and additionally, in 1990, vinifera acreage was 54% of total acreage planted versus 7% in 1983. The above price increase reflects the improvement in plantings (ie., grape quality) and the reduced domestic supply as well.

6.1.2 Wine Prices

Meanwhile, between 1989 and 1992 the net selling price of a 750 ml. bottle of wine rose steadily until 1992 when there appears a significant increase in net selling price of 71.3%.

Table 6.1.2a Net Selling Price of B.C. White Wine (FOB Winery)

	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94
White	1.90	1.87	1.61	1.90	1.90	2.01	2.02	1.97	2.09	**3.58**	3.26	3.47

Source: **B.C. Liquor Distribution Branch**

An explanation for this sudden increase in net selling price could be an awareness, generated by the increased marketing efforts undertaken in 1991, of the higher quality, premium wines now produced in British Columbia. B.C. wine quality has greatly improved over the years and many B.C. wines have won awards in prestigious international competitions. It is still a surprising one-time increase which then falls back slightly in the following year.

Table 6.1.2b Net Selling Price of Imported White Wine (FOB Winery)

	'83	'84	'85	'86	'87	'88	'89	'90	'91'	'92	'93	'94
White	1.44	1.17	1.12	1.17	2.82	2.06	3.02	3.00	3.02	2.55	2.61	2.70

Source: **B.C. Liquor Distribution Branch**

By comparison, the net selling price of imported white wine shows a 46.6% increase between 1988 and 1989, but prices subsequently follow a decreasing pattern through to 1994. No explanation is available for the 46.6% increase other than perhaps poor growing conditions which may have increased the wineries' costs.

At the end of 1987, the B.C. Grape Marketing Board established reference prices for grapes that would be in effect until the end of 1994 when a free market situation would characterize the B.C. grape and wine industries with respect to pricing of grapes. The reference prices would include an "escalator/acre" of approximately 4 percent per year and a bonus/penal

system for quality or lack thereof. The prices were to be based on the cost of production per acre and the "escalator" amounts paid from a government fund; the Cash Cost Escalator Fund. Thus the price to the wineries would not change during this six year period (1988 through 1994).

The increase in price commanded for bottled domestic wines reflecting consumer appreciation for the improved quality of B.C. wine, portrays evidence that B.C.wines can compete on an international level. True, government assistance as enabled the B.C. wine industry to adapt its product and market heavily, however, the wine product truly is of premium quality and warrants the increase in price. Grape prices should also increase following 1994 as winemakers cannot improve upon the quality of grape that enters the winery and prices should reflect this higher quality input.

Industry efforts to improve competitiveness has also meant changes in production.

6.2 Changes in Production: Domestic and Imported

Two separate changes to production have been evident following the Free Trade Agreement: 1) the estate wineries, responding to increasing mark-ups on their products, are pursuing a direct-mail retailing scheme, in order to avoid the liquor stores' pricing policies and 2) major wineries have increased production of bottling imported wines by **86% since 1989.** Bottling imported wines takes advantage

both of un-used capacity and cheaper, tanks of imported wine. However, wine sales in volume terms for major wineries continue to decrease as depicted below in Table 5.2a. Sales in 1993 were 32.6% less than 1989 sales. Given that sales of jug wine were on the decline, major wineries were forced to cut back production of that segment and concentrate on competing in a higher premium market. As a result, price per bottle received by the wineries was higher and therefore could compensate somewhat for the decrease in production.

Again, B.C. Liquor Board sales data has been used to estimate production. Tables 6.2a and 6.2b depict a continual loss of market share in British Columbia from 53% in 1989 to 42.6% in 1993. Domestic wines have experienced decreases in absolute sales volumes while imports maintain an increasing trend, particularly in the red wine category.

Table 6.2a Domestic Table Wine Sales (litres per year)

('000s)										
YEAR	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
BC Major										
White	14,726	13,624	14,458	15,175	13,731	12,201	11,476	10,983	10,198	9,156
Rosé	72	64	46	41	41	29	16	12	14	13
Red	5,045	5,295	4,848	4,181	3,817	3,120	2,827	2,634	2,554	2,423
Total Major:	19,844	18,984	19,354	18,397	17,591	15,352	14,320	13,630	12,766	11,592
BC Estate										
White	117	161	323	374	516	503	537	702	875	1,009
Rosé	7	11	14	5	6	6	7	10	10	16
Red	29	39	84	85	103	93	103	123	152	183
Total Estate:	154	212	422	464	626	602	648	836	1,036	1,208
Total Major & Estate:	19,998	19,196	19,776	18,861	18,217	15,954	14,968	14,466	13,802	12,800

Source: **B.C. Liquor Distribution Branch**

Gains continue to be posted by the B.C. Estate winery sector and market share losses appear to have moderated by the end of 1993.

Table 6.2b Imported Table Wine Market Sales (litres per year)

('000s)										
YEAR	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Imports										
White	9,473	9,403	8,424	7,779	7,738	9,241	9,817	9,788	9,801	9,850
Rosé	248	237	236	209	240	325	484	512	528	523
Red	3,716	3,611	3,492	3,493	3,687	4,436	4,824	5,221	6,064	6,891
Total Imports:	13,439	13,253	12,154	11,482	11,667	14,002	15,125	15,520	16,393	17,264

Source: **B.C. Liquor Distribution Branch**

... page 54

Table 6.2b refers to imported bottles only and depicts a continual increase in volume sales per year.

The wine industry has adapted production by concentrating on premium quality wines and introducing new products such as "blush" wines and ice wines into the market. Wineries have introduced new product lines or have repackaged their wines to develop a more upscale image. Wine coolers, which provided an outlet for wines from fruits other than grapes, have declined in market share. They represented 15% of the market in 1989 and in 1993 represent only 7% of the total wine market.

Table 6.2c Cooler Market Sales (litres per year)

('000s)										
YEAR	1984	1985	1986	1987	1988	**1989**	**1990**	**1991**	**1992**	**1993**
Domestic Wine Coolers	1,265	3,783	4,437	6,071	6,123	4,965	4,830	3,865	3,293	2,660
Imported Wine Coolers	0	.869	.376	83	205	377	420	432	429	265

Source: **British Columbia Liquor Distribution Branch, Quarterly Market Review of Provincial Liquor Sales**

The B.C. wine industry has undergone major rationalization as some wineries have closed or merged. Fragmentation of the Canadian market remains because interprovincial barriers to trade impede the free movement of domestic wines across Canada. These barriers limit the opportunity for major wineries to completely rationalize production and achieve maximum production efficiencies.

... page 55

The smaller, estate wineries are also constrained by these barriers from serving the entire Canadian market.

Many grape-producing farms have entered into wine production in the post-FTA era in an attempt to secure a future for their grape production and to reap any benefits that may be available in wine production and marketing. Estate wineries are also characterized by this level of vertical integration which assists in the coordination of the various production processes and brings the decision-making elements together under one entity. Vertical integration has not been seen as a viable option for major wineries due to size and production requirements.

6.3 Changes to Industry Sales and Revenue

While industry sales were also reflected in the above discussion on production, changes in revenue provide an angle that reflects an industry producing less, better quality wines for a higher return. The following retail price breakdown outlines how retail pricing has changed following the Free Trade Agreement and GATT ruling enactment. The data are based on a 750 ml. bottle of white table wine. Given that sales of this product represent 83% of wine sales for estate wineries and 79% of wine sales for major wineries, this is assumed to be representative of the B.C. wine industry.

Prime cost to the LDB represents the amount paid per bottle to the distributing winery and is assumed also to be the amount the winery would receive per bottle. This variable is considered an acceptable proxy for average per bottle revenue to

... page 56

the winery. The following Table 6.3a breaks down and allows for comparison of retail prices for domestic and imported wineries. Worthy of notice are the much higher "prime cost" for B.C. table wine between 1988 and 1993 and the increase in taxes on imported wines in the post-free trade environment.

Table 6.3a Retail Price Breakdown Comparison (1988, 1993 and 1994)

Components	B.C. Table Wine			Imported Table Wine		
	1988	1993	1994	1988	1993	1994
Prime Cost to LDB/750 ml. bottle	2.01	3.26	3.47	2.06	2.61	2.70
Federal Excise/Duty **	0.34	0.38	0.38	0.37	0.42	0.42
					0.60	0.63
					0.42	0.42
Federal Sales Tax/GST	0.42	1.27	1.37	0.36	1.40	1.45
Sub-total	2.77	4.91	5.22	2.79	5.45	5.62
LDB Markup	1.52	3.83	4.23	3.29	4.21	4.34
Provincial Sales Tax	0.26	*	*	0.37	*	*
Total Cost to Consumer:	4.55	8.74	9.45	6.45	9.66	9.96

**** Note:** **1993 and 1994 data for imports contains different tax categories than the 1988 data. 1993 and 1994 contain $0.60 and $0.63/750 ml. bottle for Domestic charges (Agent Fees) respectively; $0.42/750 ml. bottle for Duty; and $0.42/750 ml. bottle for Cost of Service (COS) Adjustment.**

*** Note:** **PST of 10% is included in Federal Sales Tax category for 1993 and 1994 data.**

In 1988, B.C. wineries received $2.01/bottle whereas in 1993, they are receiving $3.26/bottle based on 750 ml. volumes. This is an increase of 62 percent. Whereas, the prime cost of imports has risen only 27 percent. The most probable explanation is that the price reflects the improved quality of B.C. wines. However it may also relate to the grape pricing mechanism adopted for the transition years from 1988 to 1994. If so, then 1995 could result in an substantial fall in price to the wineries or prime cost to the LDB. This fall in price would pose considerable difficulties to the wineries. Especially those that have recently entered the market and projected their success based on the assumption that prices will

... page 58

continue to rise.

The other interesting point is the increase in taxes on imports. Markups have not decreased for imports; they have simply risen on domestic product to virtually equal imports. In addition, there appears to be an extra $0.37/bottle in taxes charged on imports.

It is difficult to draw any conclusions as to the competitiveness of either wines without the aid of actual cost of production data. Given that this thesis' aim is to determine the post - free-trade competitiveness of the B.C. wineries, the interest in net revenue is specifically for B.C. wineries. In order to determine if the extra $1.25 per bottle is making the winery more profits, one needs cost of production data. This data is available for 1993, but is unavailable for other years.

As explained in section 4.5, various assumptions were made with regard to costs of production. The revised costs of production for 1988 through 1993 compared with revenue figures from the BCLDB, provided profits of $1.61/litre in 1988 and $3.01/litre in 1993. Given the assumptions, B.C. wineries' profit per litre has increased over the 5 year period by 87 percent.

Explanations for this relatively large jump in profits can be given in part by improved quality and more intense product promotion/marketing. However, we cannot be led to the conclusion that B.C. wineries are operating in a markedly improved profit climate as there is not sufficient cost data against which to

compare the increased revenues. However, given that the Cost of Production data are for 1993, they would include the higher production costs and any new marketing and packaging costs. Therefore, without more data, one can assume that the extra revenues are making direct contributions to profit. The only question is whether the extra revenue/litre compensates for the smaller number of litres being sold.

Table 6.3b Gross Revenue Comparison for B.C. Wineries

CATEGORY	1988	1993
VOLUMES ('000s)	18,217.50	12,800.30
REVENUE/LITRE*	$2.68	$4.62
GROSS REVENUES	$48,822.90	$59,074.66

Source: B.C. Liquor Distribution Branch, Quarterly Market Review of Provincial Liquor Sales; B.C. Grape Marketing Board.

***Note:** Figures are sourced from Table 6.3a and converted to a per litre basis.

As we can see in Table 6.3b, the extra revenue/litre does compensate, leaving an increase in revenue of $7 million in total. This 14% increase in revenues is not trivial.

The following Table 6.3c bases its revenue calculations on the above "Prime Cost" figures from Table 6.3a.

Table 6.3c Change in Revenue (1988 and 1993)

WINERY TYPE	1988	1993	% CHANGE
Estate	$1,258,260	$4,191,760	233%
Major	$35,357,910	$40,224,240	13.8%

Source: **BCLDB, 1994.**

The FTA seemingly has been healthy for the estate wineries' revenues. The estate winery industry is 66% larger and sales continue to increase. New wineries continue to enter the estate and farm winery segments. While currently there are 11 estate wineries and 11 farm wineries in the industry, estimates put the numbers at 35 estate/farm wineries by 1996. This situation is also contributed to by increased consumer demand. It is evident that the improved quality of wines is proving to be accepted and demanded by consumers. B.C. is showing positive signs of being able to compete in a, post-FTA, niche, premium wine market.

The major wineries, despite sales reductions, have continued to post revenue gains between 1988 and 1993.

6.4 Changes in Profitability/Net Revenue

Given that cost of production data is virtually unobtainable from the private enterprise wineries, I have attempted to estimate the cost of production of wine using Statistics Canada's Gross Domestic Product Index (1986 = 100) to deflate the 1993 cost of production back to 1985. Price Waterhouse conducted a study[25] of

[25]See Appendix B for critique of Price Waterhouse Study.

the B.C. wine industry in 1993 and provided in that study a cost of production figure for major wineries of $1.34/litre. It is this figure that is deflated back to 1985 in the table below.

... page 62

Table 6.4a Costs of Production and Net Revenue per Litre

Year	GDP INDEX	% Change	Deflated Cost/Litre	Revenue per Litre	Net Revenue per Litre
1985	97.70		$1.02	$2.15	$1.13
		2.30			
1986	100.00		$1.04	$2.53	$1.49
		4.70			
1987	104.70		$1.09	$2.53	$1.44
		4.90			
1988	109.60		$1.15	$2.68	$1.53
		5.30			
1989	114.90		$1.21	$2.69	$1.48
		3.70			
1990	118.60		$1.26	$2.63	$1.37
		3.00			
1991	121.60		$1.30	$2.79	$1.49
		1.70			
1992	123.30		$1.32	$4.77	$3.45
		1.40			
1993	124.70		$1.34	$4.35	$3.01

Source: **BCLDB; Ministry of Agriculture, Fisheries and Food; 1993 Price Waterhouse Study, "B.C. Wine Industry..."; Statistics Canada Cat. No.13-201.**

BCLDB data on revenues per bottle were based on a 750 ml. bottle. To provide consistency with the cost data, the revenues have been multiplied by 1.33 to convert them to a per litre basis. The assumption is made that there are no volume discounts obtainable between the 750 ml. and 1 litre wine containers.

... page 63

The Price Waterhouse cost of production figure of $1.34/litre is based on the following components:

- bottling materials $0.51/litre
- grape materials $0.37/litre
- wages and benefits $0.15/litre
- plant overhead $0.13/litre
- other ingredients $0.11/litre
- other $0.07/litre

In assuming that the costs of production have not changed except for inflation, this procedure depicts the B.C. wine industry as appearing to enjoy a large increase in profit between 1991 and 1992; an increase of 132%. This procedure also assumes that the industry produces at a constant cost; increases or decreases in scale would have no effect on unit costs. Economies of scale are proving not necessarily significant especially when quality is involved. The success of the estate wineries and the lack of new entrants to the major's category depicts that in quality wines the economies of scale are small if present at all.. The profit increase is depicted in Figure 6.4 which graphs the data from Table 4.5.

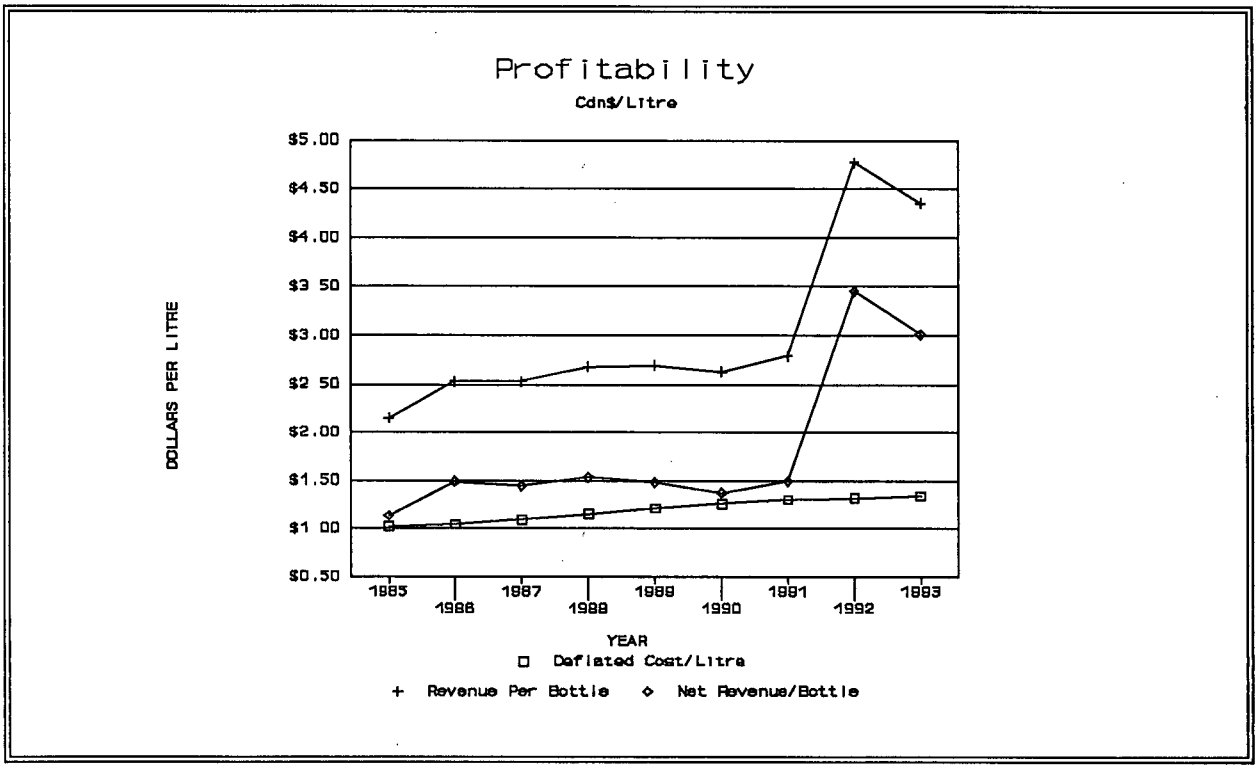


Figure 6.4 Winery Profitability 1985-1993

Source: **BCLDB, Ministry of Agriculture, Fisheries and Food, 1993 Price Waterhouse Study.**

Concerns arise over the lack of detail regarding cost of production. The components arguably have changed between 1988 and 1993. One area is marketing costs, which may be contained within the "plant overhead" component. Given that sales of jug wine have been decreasing since 1985 and historically were the main focus of the major winery sector, greater emphasis on marketing had to have been spent to increase consumer awareness of the premium, high-quality wines now available from B.C.'s domestic wineries. This would translate into a lower Plant Overhead component for 1988 compared with 1993 and would have increased the size of profit currently shown for 1988.

... page 65

Additionally, with sales of table wines falling by 34% between 1988 and 1993, plant overhead would have been a smaller amount in 1988 than it was in 1993.

The grape materials component is also one that may be proportionately higher in 1993 than in 1988. If one assumes a constant conversion factor for 'X' tons of grapes to 'Y' litres of wine, the cost of grapes/ton could be converted to a cost per litre of wine and produce a more realistic cost component for "Grape Materials".

The Price Waterhouse study stated on page 2 that B.C. grape growers supplied 51 percent of grapes processed by major wineries (1991/92) and the United States supplied the remaining 49 percent. Additionally, information was obtained from the major winery sector that the majority of U.S. grapes purchased were Thompson Seedless. Rounding the supplier share to 50 percent for both B.C. and the U.S., and accepting the 600L/ton conversion factor (Ann Sperling, Winemaker, Cedar Creek Winery, personal conversation, July 6, 1993) as an average, the cost/ton of both Thompson Seedless and B.C. grapes as a whole are employed to more accurately reflect the "Grape Materials" component for 1988 through 1993.

Firstly, the cost/ton of B.C. processed grapes is converted to a cost/litre (based on 600 L/ton) and the percent change from 1993 is recorded. The same is done for Thompson Seedless grapes from California. Then an average of the two percentage change columns is taken. Accepting the Price Waterhouse cost of $0.37/litre as the Grape Materials component, the component values are found for years 1992 back to 1988 by subtracting the average percent change in cost/litre.

... page 66

Table 6.4b "Grape Materials" Component Variations for B.C. Grapes

	(1988 - 1993)		
YEAR	COST/TON	COST/LITRE	% CHANGE FROM PREVIOUS YEAR
1988	$700.13	$1.16	37.0
1989	$952.21	$1.59	- 4.0
1990	$909.47	$1.52	3.0
1991	$936.25	$1.56	4.0
1992	$975.46	$1.63	- 2.0
1993	$954.92	$1.59	---

Source: **Cost/ton data from B.C. Ministry of Agriculture, Fisheries and Food, February 8, 1994.**

Table 6.4c "Grape Materials" Component Variations for California Thompson Seedless Grapes

	(1988 - 1993)		
YEAR	**COST/TON**	**COST/LITRE**	**% CHANGE FROM PREVIOUS YEAR**
1988	$114.78	$0.19	16.0
1989	$132.02	$0.22	-5.0
1990	$123.69	$0.21	19.0
1991	$148.34	$0.25	16.0
1992	$176.71	$0.29	-14.0
1993	$151.78	$0.25	---

Source: **Cost/ton data from California Department of Food and Agriculture, Sacramento, California "Final Grape Crush Report" 1989 - 1994.**

Table 6.4d, below, takes the average of the "% Change from Previous Year" for B.C. and California (1992 eg: (-0.14 + -0.02)/2 = - 0.08) and deflates the "Grape Materials" component back to 1988. The "Remainder" of the $1.34/litre cost, $0.97, is deflated by the GDP index (1986 = 100). The two columns (Grape Materials and Remainder) are added together to obtain a presumably more accurate annual cost of production figure.

Table 6.4d Revised Cost of Production Figure (1988 - 1993)

YEAR	B.C. % CHANGE	CA. % CHANGE	AVG. % CHANGE	"GRAPE MATERIALS"	"REMAINDER"	COST OF PROD'N
1988	37.0	16.0	26.5	$0.24	$0.83	$1.07
1989	- 4.0	- 5.0	- 4.5	$0.33	$0.88	$1.21
1990	3.0	19.0	1.1	$0.32	$0.91	$1.23
1991	4.0	16.0	1.0	$0.36	$0.94	$1.30
1992	- 2.0	- 14.0	- 8.0	$0.40	$0.96	$1.36
1993	--	--	--	$0.37	$0.97	$1.34

Table 6.4e Profit per Litre based on Revised Cost of Production Figure

YEAR	DEFLATED COST/LITRE	REVENUE PER LITRE	PROFIT PER LITRE
1988	$1.07	$2.68	$1.61
1989	$1.21	$2.69	$1.48
1990	$1.23	$2.63	$1.40
1991	$1.30	$2.79	$1.49
1992	$1.36	$4.77	$3.41
1993	$1.34	$4.35	$3.01

Despite more accurately reflecting the cost of grapes, the profit increase between 1991 and 1992 continues to be a significant percentage, 129. It continues to seem unrealistic that the industry would experience a 129% increase in profits over one year. However the main message is clear. Profit per litre has risen in the last two years. This profit offsets the total output reduction to increase total profits in the B.C. wine industry.

The wine industry's response to the above profit increase is that their costs have risen since the FTA and GATT negotiations. The markups on their products have

... page 69

increased resulting in a higher retail price, but perhaps most significant is the high cost of producing and marketing the premium product on which the B.C. Wine Institute promotion program is based. Again, this points to the need for a more accurate cost of production figure for the post-FTA period. According to the wineries, the cost data used in this study does not accurately reflect the industry costs of producing and marketing the premium B.C. product and subsequently the profit figures would be considered to be overstated.

6.5 Changes in Marketing Strategies:

In 1989, in response to the impact of the FTA, the British Columbia Wine Institute was formed. A year later, the Wine Institute, in statutory powers authorized by The British Columbia Wine Act, S.B.C. Chap. 35, became responsible for establishing minimum standards for British Columbia wine. Responsibilities also extended to introducing, controlling and maintaining standards under the trademark VQA, the British Columbia Vintners Quality Alliance appellation. Highlights for the appellation and wine-making standards include:[26]

- wines bearing the label designation "Product of British Columbia" are produced from 100% British Columbia grown grapes;

- optimum growing standards established;

---

[26]British Columbia Wine Institute, promotional pamphlet. Publication date unknown.

- wines bearing the name of a viticultural area are derived from a minimum of 85% of the grapes grown in the named area;

- where a vintage date is stated on the label, at least 95% of the wine is obtained from the designated year of harvest;

- wines labelled as estate bottled are produced from grapes grown in a vineyard owned by the winery and all processing steps from crush to bottling are performed at the bottling and selling winery;

- as a final check on quality, a panel of wine tasters taste and approve each wine as being true to varietal type and free from flaws.

The British Columbia Wine Institute initiated a vigorous marketing campaign to inform the public of these changed standards affecting the British Columbia wine industry. The Institute also included as part of its mission to coordinate and exchange information and research regarding the overall improvement of quality within the grape and wine industry.

SECTION 7.0 CONCLUSIONS AND RECOMMENDATIONS

7.0 Conclusions

The industry emerging from the aftermath of the Free Trade Agreement and GATT decision is a much stronger one. Although Canadian wine consumption is declining, albeit at a slower pace than the consumption of beverage alcohol in

... page 71

general, there are good opportunities for B.C. wineries to compete in the smaller, but stable and lucrative premium wine segment while still having a major presence in the overall table wine market. The industry has adjusted at least at the winery level, to the FTA and GATT policies and is apparently at least as profitable as pre-1988. This is quite remarkable given the reduction in protection that took place.

Industry changed its product mix to maintain its competitiveness. Even more dramatic has been the growth of estate wineries.

There is a question of what will prices look like in 1995 when there will clearly be free trade in wines and grapes. How profitable the industry will be then is a question that remains to be answered.

Greater flexibility in pricing and retailing of premium wines and in licensing requirements would significantly help the premium wine industry take advantage of investment opportunities and un-used economies of scale. This flexibility would not be to the detriment of the major winery segment. The development of smaller volume, specialty markets by small premium wineries has and will continue to enhance the image of all B.C. appellation wines to the benefit of all wine producers. The major wineries' retail stores should also be allowed the pricing flexibility recommended for the estate and farm level wineries. Unfair advantage to the major wineries would not be an issue as these wineries require large volume sales that can only be achieved through the LDB outlet system or

... page 72

something similar.

Major wineries are likely to continue increasing their production of "bottled in B.C." imported wines. This product supplies the lower-priced table wine market and complements their domestic premium wines, however additional changes to policies must occur first. Impediments to the adjustment process lie in the interprovincial barriers to trade and the remaining content regulations imposed by some provincial governments. The extent to which the industry will be able to adjust successfully will depend on the removal of these barriers and the rate at which it is done.

As noted earlier, grape growers have already undergone significant adjustment. Greater attention is being paid to viticultural techniques to improve grape quality and increase vine productivity. The newly planted, preferred vinifera varieties, when fully viable, will provide wineries greater opportunity to source premium grapes domestically.

Efforts to gain international recognition of Canadian appellation and viticultural designations must continue on a bilateral basis with the EC as well as in broader multilateral trade negotiations.

The B.C. industry has steadily improved its product due to the increased availability of better-quality and favoured varieties of grapes and the benefit of greater wine-making experience. The industry is now marketing the message of

... page 73

its international successes to B.C. consumers. The industry is promoting wine routes to encourage both Canadian and international tourists to visit wineries and discover the improved quality for themselves.

From a profitability standpoint, the winery segments, estate and major, have experienced increases since 1988. The quality of product produced today commands a higher, premium price which, combined with greater sales in the estate segment, has generated greater revenues for that segment. The higher prices in the major winery segment has offset the sales volume decreases so that this segment has also experienced revenue increases over 1988. It is difficult to say how much more profit is being made, if any, given that one cannot grant too much credibility to the cost data employed in this study.

Profitability was based on cost data that was virtually unobtainable. Various configurations were employed to generate an annual, real cost figure for the years 1988 through 1993. The assumptions of no changes except for inflationary effects, may have been too great to make. However, it is the author's claim that the industry is indeed turning a better profit than pre-FTA/GATT given that the 1993 cost data are accurate at least to the Price Waterhouse study. Therefore, current profitability is not in doubt. Although the cost figures are not exact for '89, '90 and '91, there is no question that profits were lower then given the significant increase in 1992. The industry does state however, that costs of producing and marketing a premium wine product are great and significant profits, such as those resulting from this study, are not being realized. It is suffice to say, that given

... page 74

the entry rate of estate and farm wineries, there are at least normal profits to be made in the industry.

The industry has recognized and taken advantage of the unique climate areas of British Columbia that afford reputable, quality wine-making regions. Great effort has been expended in trying to keep taxes down and the government in an in-direct role-play. Eliminating mark-up on sales outside of the LDB would not necessarily generate loss of revenue to the province for:

- the volume of wine sold in this manner is a small percentage of total provincial wine sales;

- the fee for service in marketing this product will be transferred to the private sector which in turn creates employment and economic activity. Additionally the LDB would not incur the cost of listing and distributing these products;

- economic multipliers that occur with the value-added aspects of an agriculture-based industry are considerable and should generate far greater amount of revenue to the provincial economy if is allowed to develop and flourish unrestricted.

While provincial trade barriers and wine content regulations continue to influence industry competitiveness, significant changes have been made in these areas

... page 75

within the last five years, enabling the industry to adjust to the more open trading environment.

The industry's competitiveness and profitability in 1993 and 1994 are noteworthy given the reduction in government protection and the short turnaround time in which a premium product was produced and marketed. 1995 however involves complete removal of controls. The price of grapes will likely fall in B.C. and the price of wine may come down somewhat also. If this is true, it is possible that 1995 will bring some added price - cost pressures on the wineries, hence the need to make the industry more efficient.

Adams (1992) also made the above prediction that with the industry overhaul in response to the FTA and GATT rulings the British Columbia wine industry appeared to be "responding to the new competitive atmosphere of a global wine market." This study and Adams' serve as enlightenment on the edge of the true "competitive" wine industry, but the real test will be shown in studies done five years from now when the industry has had five years' experience of complete removal of government controls. Today, government continues to provide monies to the B.C. wine industry for various applications. Perhaps this type of subsidy will never cease as long as the government continues to use the liquor industry for major revenue gains through taxation and markups.

7.1 Recommendations for Further Research

This paper has identified many factors that will affect the future of B.C. wineries. It has raised the basic data and scenarios to the limitations of the scope of this paper.

However, greatly needed for the industry is a time-series based cost study that could provide cost of production figures for wine-making. Cost data is readily available for grape production, but is sadly lacking for the wine industry. Granted it is difficult to get private firms to submit their costs, it would present a much clearer economic picture of both pre- and post- Free Trade environments.

Removal of interprovincial barriers and adjustments to the content and labelling regulations imposed by government need to be addressed in order to further competitiveness. The government also needs to modernize its marketing system; accepting credit cards at liquor stores would be a significant start.

Privatization of the liquor marketing system may or may not produce benefits for the wineries, however it would be interesting to compare the costs/benefits associated with Alberta's newly privatized liquor marketing system with British Columbia's.

APPENDIX A: BIBLIOGRAPHY

Adams, Derek. "The Estimation of the Degree of Price Competition in the British Columbia Wine Industry (1957 - 1986)", Vancouver, 1992.

Baxter, James. "The Toast of BC Wines," *Easyliving Magazine,* (October 1994), 24 - 27.

Bremner, Lynn. *1993 Price Comparisons,* Oliver, 1993.

The British Columbia Grape Marketing Board, *Marketing Promotion Program Development for the British Columbia Wine Industry,* June 7, 1989.

The British Columbia Grape Marketing Board. *The Required Elements of a British Columbia Premium Wine Policy,* May 8, 1989.

-----. *Discussion Paper No. 1,* Kelowna, May 14, 1987.

-----. *The British Columbia Wine Grape Industry Status Report - 1990,* Kelowna, Feb. 20, 1991.

B.C. Liquor Distribution Branch. *Annual Report(s) 1989 - 1993.*

B.C. Liquor Distribution Branch, *Price List - General Products.*

B.C. Liquor Distribution Branch. *Quarterly Market Review,* December 1984 - December 1994.

British Columbia Wine Institute. *Annual Report 1991,* Kelowna, 1991.

-----. *British Columbia Wine Institute,* n.d.

British Columbia Wine Trails, All About British Columbia Wines. Vol.4. No.2, Summer 1994.

... page 78

Campbell, Robert A..*Demon Rum or Easy Money: Government Control of Liquor in British Columbia from Prohibition Privatization,* 1991.

Country Life in British Columbia. Volume 80. No. 9, September 1994.

Canadian Wine Institute. *The Impact of theF.T.A.*, n.d.

External Affairs Canada, *The Canada - U.S. Free Trade Agreement,* pp. 135 - 140, Copy 10-12-87, Ottawa, Canada.

Eyrl, Kelly A. "Canada - U.S. Free Trade and its Impact on the B.C. Grape Industry", Vancouver, 1989.

McGuire, Dennis W. *The Political Economy of the Grape and Wine Industry in British Columbia and the Impact of the Free Trade Agreement,* Kelowna, 1991.

Mathieson, David S. *Candaa - United States Bilateral Free Trade - The Prospects for the British Columbia Grape and Wine Industry,* April 1988.

Ministry of Agriculture and Fisheries. *Annual Statistics 1988, 1990, 1991, 1992,* Province of British Columbia.

Ministry of Agriculture and Fisheries. *Grape and Wine Forum Proceedings,* April 4 - 5, 1990, Province of British Columbia.

Ministry of Industry, Science and Technology. *Industry Profile 1990 - 1991 Wineries.*

Porter, Michael E. *Canada at the Crossroads, The Reality of a New Competitive Environment*, Canada, 1991.

------. *Competitive Advantage, Creating and Sustaining Superior Performance,* New York, 1985.

------. *Competitive Strategy, Techniques for Analyzing Industries and Competitors,* New York, 1980.

------. *The Competitive Advantage of Nations,* New York, 1990.

The Province, various.

Scherer, F.M. *Industrial Market Structure and Economic Performance,* Boston, 1980.

Statistics Canada. *A User Guide to the Canadian System of National Accounts,* Catalogue 13-589E - Occasional.

-----. *Farm Input Price Index - First Quarter 1994*, Catalogue 62-004 Quarterly.

-----. *Guide to the Income and Expenditure Accounts,* Catalogue 13-603E, No. 1 - Occasional.

-----. *National Income and Expenditure Accounts, Annual Estimates, 1981 - 1992,* Catalogue No. 13 - 201.

The Vancouer Sun, various.

Vielvoye, John. *Profile of the Grape & Wine Industry of British Columbia,* Ministry of Agriculture, Fisheries and Food, Victoria, 1991.

Washington Agricultural Statistics Service, *Washington Grape Report*, Janury 26, 1994.

Wine Institute of New Zealand Incorporated. *Annual Report for the year ended 30 June 1993,* Auckland, 1993.

APPENDIX B: CRITIQUE OF PRICE WATERHOUSE STUDY

Price Waterhouse, under contract with the B.C. Wine Industry, produced a report in February of 1993 entitled "B.C. Wine Industry Group - Financial Performance of the Wine Industry in B.C.". This report can be lauded for being the first to attempt to obtain costs of production from the wineries in British Columbia. Despite being under contract with the wine industry, not all wineries participated in the study. The financial data represents the 1992 fiscal year ends for 4 of 6 major wineries. The 1992 fiscal year ends had not yet ended for the other two major wineries, therefore, Price Waterhouse used 1991 year end results. Price Waterhouse used 1991 fiscal year end financial data for five of the seven estate wineries responding (12 estate wineries were sent surveys) and 1992 fiscal year end results for the remaining two estate wineries. In the farm segment, (1 response of 7 farm wineries surveyed) Mike Warren of the Ministry of Agriculture, Fisheries and Food provided data derived from a) phoning proprietors who own and operate farmgate wineries to gather information on fixed assets and employment; and b) collecting sales figures from data accumulated by the Liquor Distribution Branch.

While the study provides an interesting snapshot of an industry at one period in time, better use of the industry's time and money would have been to attain information over a period of time to reflect trends and health of the industry. The study produced an overview of the industry coupled with an accountant's

perspective of the financial results.

Data was provided on the expenditures to taxation, employment and compensation,capital, materials and other purchases. A Cost of Goods Sold analysis per litre sold provided cost data for this masters' thesis that otherwise would have been extremely difficult to obtain.

APPENDIX C: THE DIAMOND OF COMPETITIVE ADVANTAGE